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Report of Proceedings of a Study on ANIMAL HEALTH EMERGENCIES

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11 - 15 March, 1985

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Australian Counter Disaster College
Mount Macedon
1985



THE COLLEGE CHARTER

"The role of the Australian Counter Disaster College is to contribute to the development of an efficient Australian counter-disaster capability by training selected personnel in counter-disaster and civil defence requirements; by fostering understanding and co-operation between appropriate elements of the community and by undertaking research into selected aspects of disaster."



COMMONWEALTH OF AUSTRALIA

With the Compliments

of - 13 March, 1985

Australian Counter Disaster College

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Natural Disasters Organisation
Department of Defence

Report of Proceedings of a Study on ANIMAL HEALTH EMERGENCIES

11 - 15 March, 1985

AUSTRALIAN COUNTER DISASTER COLLEGE

ANIMAL HEALTH EMERGENCIES STUDY

11 - 15 MARCH 1985

REPORT OF PROCEEDINGS

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AUSTRALIAN COUNTER DISASTER COLLEGEANIMAL HEALTH EMERGENCIES STUDY11 - 15 MARCH 1985REPORT OF PROCEEDINGSINTRODUCTION

1. A study to review developments in the planning for and management of animal health emergencies in Australia, and to plan further action, was held at the Australian Counter Disaster College at Mount Macedon, Victoria, between 11 and 15 March 1985. The study, which was co-sponsored by the Commonwealth Department of Primary Industry (Australian Bureau of Animal Health (1)) and the Commonwealth Department of Defence (Natural Disasters Organisation), was designed to:

- a. acquaint participants with current arrangements for managing major animal health emergencies in Australia;
- b. consider selected operational and management aspects of countering animal health emergencies, including'
 - likely resource availability,
 - Commonwealth/State support arrangements,
 - specific incidents such as those associated with wildfire effects, etc.,
 - monitoring and controlling feral animal populations,
 - information management systems, and
 - public relations;
- c. consider requirements and necessary arrangements for training and test exercising at all levels to ensure effective response; and
- d. give some consideration to the problems of contamination of the food chain.

DEVELOPMENTS IN ANIMAL HEALTH PLANNING
AND MANAGEMENT

2. This study was a sequel to the similar Exotic Animal Disease Emergency Seminar held at the College in March 1980 (2) and provided an opportunity to review developments in planning and management since that seminar. The study noted the following general developments since the 1980 seminar:

- (a) No counter-disaster plans for dealing with animal health emergencies existed at the time of the 1980 Seminar, although veterinary manuals of procedures had been written for the major exotic diseases. Participants agreed that there was an urgent need to develop animal health emergency plans, within counter-disaster arrangements in all States and Territories and the Commonwealth.
- (b) It was reported at the 1985 Study that the Commonwealth and most States had written plans. Those States that have not yet completed their plans are in the process of negotiating the format and content of plans with supporting agencies. Plans in each State form part of the relevant counter-disaster organisational and legislative framework. When this process is complete, a co-ordinated national plan for Animal Health Emergencies will exist. Some States and Territories have now exercised their individual plans. An Animal Health Emergency Information System (ANEMIS) was developed, forming the basis of standardised emergency disease eradication management. The system has been adopted by all Australian States and Territories.
- (c) The period between the two studies has seen the virtual completion of the Australian National Animal Health Laboratory at Geelong. The laboratory will greatly increase the nation's capacity for diagnosis, research and training. Procedures for all of these activities have been the subject of negotiation and agreement between the Commonwealth and States.

2. (d) In 1983, Animal Health Committee decided to re-constitute the Exotic Diseases Sub-Committee. The Sub-Committee had been disbanded in 1979, having completed its charter by producing model plans. However, following the 1980 ACDC Seminar, there was a new appreciation of the complexity and dynamic nature of the planning and preparations needed. The Sub-Committee consists of senior veterinarians involved in exotic disease preparations in each State and from the Australian Bureau of Animal Health, Australian National Animal Health Laboratory, Commonwealth Scientific and Industrial Research Organisation, the Australian Quarantine Service and the Export Inspection Service. There is also now a primary producers' representative, from the National Farmers' Federation.
- (e) The Exotic Diseases Sub-Committee reviews all aspects of preparations, including procedures, resource requirements, training, legislation and public relations. No counter-disaster organisation is represented on the EDSC, but committee members are responsible for liaison with supporting agencies in their respective State and the Commonwealth.

ATTENDANCE

3. The study was attended by senior representatives of the appropriate Commonwealth, State and Territory Government departments, and by members of professional and associated groups. A full list of attendees is at Annex A, but in summary the following were represented at the study :

a. Commonwealth Departments of :

Defence (Natural Disasters Organisation and Joint Operations)

Primary Industry (Australian Bureau of Animal Health, Export Inspection Service)

Special Minister of State (Australian Federal Police)

3. b. State and Territory representatives from :

Departments of Agriculture or
Primary Industries

Counter-disaster authorities

Vertebrate pest control
organisations

c. Additional invited representatives
from :

Australian Meat and Livestock
Corporation

Australian National Animal Health
Laboratory

Australian Veterinary Association

Communicable Diseases Committee,
National Health and Medical
Research Council

Cattle Council of Australia

National Farmers Federation

National Rural Press Club

University of Melbourne School
of Veterinary Science

New Zealand - Ministry of Civil
Defence

- Ministry of Agriculture
and Fisheries

THE PROGRAM

4. The detailed program for the study is at Annex B. In
outline, however, the program provided for :

Opening addresses by :

AVM J D G Lessels, Director General,
Natural Disasters Organisation,
Department of Defence

4. (contd)

Dr R W Gee, Director, Australian
Bureau of Animal Health, Department
of Primary Industry

Brig (Retd) I G C Gilmore, Director,
Australian Counter Disaster College,
Natural Disasters ORganisation

Background presentations on :

The Threat to Animal Health - A Review

The System For Emergency Management in
Australia

Keynote address by Mr B A Woolcock, Director,
Division of Animal Industry, Department
of Primary Industries Queensland.

National Review - A Survey of Present
Arrangements and Trends in the Management of
Animal Health Emergencies in Australia
(Commonwealth Overview and State/Territory
Summaries).

Presentations on :

The Rabies Problem

Operational Aspects :

General Operational Problems
and Concepts

Managing Animal Health Emergencies
Information

Chemical Contamination Incidents

Support Aspects :

Laboratory Support in Animal
Health Emergencies

Marketing Contingency Plans

Commonwealth Physical Support -
NDO and the Defence Force

Training and Test Exercise Needs

Major Discussion Exercise

4. (contd)

Consideration of Conclusions of Study
and Final Report

Closing address by Brig (Rtd) IGC Gilmore,
Director, Australian Counter Disaster College,
Natural Disasters Organisations.

The papers on the National Review are at Annex C;
all other papers presented are at Annex D.

Opening Addresses

5. The following opening address was delivered by AVM J D G
Lessels, Director General of the Natural Disasters Organisation:

"It is a great pleasure to me to see people from so many organisations from all over Australia here today. We have a particularly close relationship as you would be aware through the State Emergency Services. They are one of our main windows into the States and I might say that in the fourteen months since I took over as Director General of the Natural Disasters Organisation I have enjoyed tremendously what has been a very close relationship. Indeed - I think it is fair to say I have more to do with the States than I do with other Commonwealth Government Departments. Not that I feel that we don't have much to do with them, but certainly our main daily activities are very much associated with the Commonwealth/State Government relations and I place great store on ensuring that we have very amicable relationships.

I am particularly interested in this study for a couple of reasons. Firstly, because it is the first study which I have attended, and by co-incidence it is on the same subject as the very first problem which I faced last year on having taken over from General Latchford as DGNDO. After only 32 minutes in the job the phone rang and it was Dr De Souza who is the acting Director General of Commonwealth Health. He told me that there was a foot and mouth disease scare and he thought that there was a need to get together between Primary Industry Health and NDO and suggested that I chair a meeting that afternoon. Well, seeing the previous week I had been deeply involved in my former job as Director General of Air Force facilities looking after airfields and facilities being planned for the FA18 as a civil engineer, I found rather a quantum leap from that into foot and mouth disease. My staff that morning organised a very excellent New Zealand film on the subject, and that afternoon with the knowledge gathered from watching the film in the morning, I chaired the meeting which I found quite fascinating. I suppose there was one little moral

that came out of it - that even having seen the film and chaired a meeting associated with the foot and mouth scare it wasn't until six months later that I learnt what the results of foot and mouth disease were.

I think perhaps there is a message in this - namely when people who are very deeply involved in an esoteric subject get together, they do not realize perhaps that laymen like myself are not aware of some very obvious points. It was not until I saw a film on ABC TV dealing with CSIRO activities in Indonesia associated with actual foot and mouth disease there, that I learnt animals don't die of it. Prior to that I thought it was some terrible disease which spread around like some fatal disease and all the animals would die. It is a very obvious thing to you, but to me as a civil engineer I learnt quite a lot which I wished I had known six months earlier.

I will be most interested to find out what exactly you are looking to get out of this study and in particular what you expect perhaps the Natural Disasters Organisation can do.

I think it is very clear what the role of the College is, - it trains, and it has the role or function of fostering understanding throughout the community on various matters associated with disasters; but if there is anything you feel that the Natural Disasters Organisation, its Headquarters in Canberra should be doing I would be most interested to learn of that. We only have a very small staff, in fact, so I wouldn't want to leave you with an impression that I am looking for work or that we have any surplus money available. We have very limited money and fourteen people, but I think it is important following the symposium and studies that something concrete is produced which people can act upon. So, I suppose I am really saying that talking is one thing but action afterwards is another. If part of that action is that you feel NDO has a role to play in this regard, I would be very pleased to know what that is. Having said that, Director, thank you very much for this opportunity to come down from Canberra and meet you all. I wish you well and I look forward to learning of the results of your deliberations."

6. Dr R W Gee, Director of the Australian Bureau of Animal Health, the co-sponsoring organisation then followed with these words :

"Thank you Brigadier Gilmore. Air Vice Marshal and Gentlemen, I am very pleased to be here again, five years almost to the day after the last seminar and to voice my appreciation once again of the very useful supportive role that we in animal health authorities have from this organisation. Yes, I remember the day you were blooded Air Vice Marshal - it was the Humpty Doo pig incident which turned out to be a very trivial exotic disease scare, looking back in retrospect, but if it had been foot and mouth disease up there in those parts - your background in aircraft facilities might have been extremely useful. The last five years have been relatively quiet on the suspected or actual exotic disease front in Australia. We have been fortunate that there have not been many incidents and none of great consequence. That does not mean to say there have not been plenty in the rest of the world, but I think it is worthwhile just briefly remembering just what has happened in Australia in the last five years. The logistic and support facilities that animal health authorities now have, are remarkably increased in the past five years. We now have the Australian National Animal Health Laboratory at Geelong up and operating at last. Five years ago it was still a heap of concrete and dreams. It's now operating and in fact will be officially opened by the Governor General on the first day in April. We have now just about established final access to foot and mouth disease vaccine bank, shared with six other countries and located in England, which will give us vaccine support to foot and mouth disease control is we ever need it. We have well established now a screw worm fly radiation processing factory, in Port Moresby which gives us the best possible protection against screw worm fly. The last course here recognised that screw worm fly was a real up and coming palpable threat. It still is, but the CSIRO Research has now shown that the radiation technique works up there as effectively as it does in Central America so we have another arm to armamentara up there. Overseas training has been intensified. We have \$60,000.00 this year for overseas training, which we always recognise as an important part in training Australian veterinarians, particularly in recognition of diseases overseas.

On the world front things are not much better. We are still faced with the same sort of threats; foot and mouth disease really abounds except in Europe. It is diminishing perhaps in South East Asia and Europe but in the rest of the world it is still round. Rinderpest is really up and going in Africa and the Middle East, and Aujeszky's disease is in virtually every country that has pigs except Australia.

I would have tended to say yesterday, that that was one of the major problems with pigs, but African Swine Fever is rearing up again and last night our man in Europe, Bill Scanlan, rang me to tell me that they have just had a serious outbreak of African Swine Fever in Belgium, five properties infected with African Swine Fever and 2,000 pigs slaughtered over the weekend. Interestingly for those of you here who are veterinarians, this is in a country that has Swine Fever where the veterinary profession ought to be fairly conscious of it, but, nevertheless the properties had been treated by private practitioners for a week or so with antibiotics before they considered the possibility of African Swine Fever.

So we still have plenty of diseases running rampant around the world. Newcastle disease is the other one that I would still add to my short list of dangerous introduction and high risk probabilities.

While the logistic services and technologies are improved in Australia, the world scene is roughly similar and just as threatening. We still have to have these courses where support services and the keying in of emergency services is studied. It is fortunate, and unfortunate, I suppose, that we have not had any real scale outbreaks to really test and hone up our system of co-operation. We can only do this by courses of this nature and by simulated exotic disease exercises within the States at field levels. I think we are lucky that we can have these courses every few years and five years is a reasonable gap. I don't think we want to forget the course that was held in 1980. I hope the participants have re-briefed themselves on the report and I hope you will, during this week go back to the recommendations. Particularly I think you ought to note the recommendations that were made by the non-veterinarian people and their concluding statement on page 8. Veterinarians tend to be obsessed with their own technologies and their own problems, and increasingly or perhaps, hopefully decreasingly take account of the demands and issues that other sectors recognise. Those recommendations that are noted there by the non-veterinarian sources, need to be looked at again. Some of them have been implemented, some of them haven't. You might get the opportunity to do that. Finally, we meet here under the continuing threat of foot and mouth disease extortion, perhaps Mr Woolcock may allude to this. Most of you, I am sure, are aware that we have our second foot and mouth disease extortion threat from Queensland criminals and we must all recognise the relatively easy way in which a serious exotic disease could be introduced here by sabotage, and foot and mouth disease probably the most easily. There is a problem in this one - in

not wanting to publicise it too much because it adds fuel to the flames of the lunatics who might want to perpetrate it, but we nevertheless have to take account of the fact that it could be done, could be relatively easily done, and could be skillfully done of a broad front in a way that would more than match the resources that we would have. So, I think that the sort of activities that we have in a seminar of this nature should be directed to the major bushfire sort of exotic disease incident. We know that we can handle the discrete single property ones with not too much upset, although it seems pretty chaotic at the time but it is the roaring bushfire incident that would really be a problem for us, and which would need to bring together all the resources that we see accumulated here today; so, Director, thank you very much for opportunity to attend the first day and I certainly wish the study all the best."

7. Brigadier I G C Gilmore, Director of the Australian Counter Disaster College, having welcomed those attending, said :

"You will be aware that, in March 1980, we conducted an Exotic Animal Disease Emergency Seminar at this College with a view to :

- * acquainting participants with the existing arrangements for the management of a major exotic animal disease emergency in Australia;
- * considering selected operational and management aspects of countering the emergency; and
- * clarifying and developing the roles of responsible organisations and the co-ordinating mechanisms which would operate between them.

With your Joining Instructions for this Study, each of you received a copy of the Report of Proceedings of that Seminar. While several of you were present at that Seminar, you have all now had the opportunity to benefit from close study of the contents of the Report of Proceedings; and, I hope you have read and digested that Report, because it contains relevant background information for embarking on this Study. In view of the limited time available, we will not reiterate subject matter which is contained in that Report.

Since that Seminar, I have been heartened by the considerable progress which has been made in the state of preparedness to manage any exotic animal disease outbreak in Australia. However, having said that, I do not believe there is any room for smugness: there is certainly still plenty of room for improvement, and we have a long way to go before we can feel confident that any exotic animal disease outbreak will be managed as effectively as it should be.

Five years on, this Study is being staged to :

- * Review developments (in the planning for and management of animal health emergencies in Australia) since the March 1980 Seminar; and
- * plan further action.

In conjunction with representatives of the Bureau of Animal Health, Department of Primary Industry, members of my staff and I have designed this study to :

- * acquaint you with the current arrangements for managing major Australian animal health emergencies;
- * consider selected operational aspects of countering animal health emergencies;
- * consider requirements and necessary arrangements for training and test exercising at all levels to ensure effective response; and
- * give some consideration to potential problems of the food chain.

In closing the 1980 Seminar, with the Legano incident fresh in our minds, I suggested that we all needed "to think big", because a major outbreak of an exotic animal disease would soon affect several States and possibly, in due course, all States and Territories. Unless it was well managed and its spread confined, it would cause widespread and long-lasting suffering and damage, not least to our nation's economy.

I suggest that it is vitally important for you all "to think big" on this occasion, also - a major animal health emergency is going to cause us big problems. And, response to it is going to test all our talents and involve a massive materiel response. Obviously, our response will be better if the potential problems

have been addressed seriously, well in advance of the event. With this in mind, while the major discussion exercise in this Study is set in the Cohuna area of Victoria, the animal disease problem on which the exercise is based is likely to spread very rapidly to create a national emergency, requiring a co-ordinated national response.

I also warned of the consequences of continuing to plan in isolation, and stressed the importance of an aware and involved local community and the need for close cooperation, good co-ordination and inter-operability, particularly across State borders; and called for decisions to be made to ensure that prescription of authority and responsibilities would contribute to better management of future animal health emergencies. In these matters, it appears to me that considerable progress has been made in recent years.

I also said, at that time, that those with responsibility for responding and managing in the event of an animal health emergency, needed to plan well in advance, to test plans in exercises to ensure they are workable and to identify and remedy weaknesses. Again, I am pleased to observe that in many areas this advice has been heeded and, I am confident that where it has been, an improved capability now exists. Even so, you will note that this Study will give further consideration to the requirements for training and test-exercising.

I also suggested that you should not overlook the sociological aspects or the legal aspects of this type of disaster, and that you should not underestimate the logistic problems. The fact that we have not experienced in Australia a major outbreak of an exotic animal disease, could indicate that we are a lucky country, but I prefer to believe that we can contribute this fact more to good management. If good management prevails in the future, it should follow that the results will be effective as Australia's record in this field has been to date.

The Victorian authorities are currently combatting an outbreak of Anthrax in the Gippsland area and media reports, though somewhat variable in their attitudes to the outbreak and the likely outcome and threat posed to human health, indicate an orderly, prompt and adequate response. On your behalf, I wish them well in their endeavours - we hope the spread will be restricted and that the emergency will soon pass.

Let me conclude by saying that the program for this Study indicates to me that you will be busy while you are with us. I make no apology for this and trust that is how you would all wish it to be. However, the success of the Study will depend not only on the contributions made by the formal presentations, but also by the contributions from the body of the meeting. By invoking your varied experiences and backgrounds and contributing to the discussions which will take place, you will be contributing to the achievement of the aim of this Study and to its success.

As I said in my earlier letter to you, I trust your attendance at this Study will prove to be a professionally rewarding and pleasant experience. I thank you for coming, and I thank you in anticipation of the contribution you will make to the success of this Study".

Keynote Address

8. The Keynote Address was given by Mr B A Woolcock, Director, Division of Animal Industry, Department of Primary Industries, Queensland. The full text of Mr Woolcock's address is at Annex D. In presenting his paper titled "Exotic Diseases - the Changing Science", Mr Woodcock opened by mentioning the changing social attitudes to animal welfare. As a result those who carried out programs involving the destruction of animals, would be under pressure to justify slaughterings, especially of healthy contact animals. He mentioned the solid legal basis for subjecting people, animals or plants to any restraint or action. But he said that the Federal Quarantine Act was drafted to deal with human quarantinable disease problems and did not provide the necessary powers for quarantine and other essential actions for containing or eradicating disease by slaughter. He stated that the application of new technology, such as efficient FMD vaccines, had reduced the prevalence of the disease in Europe and some South-East Asian Countries, including Indonesia. He expressed the view that the FMD situation in other South-east Asian Countries could improve in the second half of this decade. He supported the Federal Government's decision to provide funds for an FMD Vaccine bank in England, but said this did not negate the policy of eradicating FMD by quarantine and slaughter.

9. He expressed concern at the Federal Government's review of the cost-sharing arrangements for eradication and control of exotic diseases. He felt this action could threaten the great degree of confidence established within the States and livestock industries, that these costs would be met nationally on a shared basis. He also expressed concern about the role of the media, when exotic disease outbreaks were suspected. He felt it was preferable for emergency organisations to take the initiative, by issuing information to the media rather than responding to inquiries after the headlines had been made. Such headlines on FMD when an outbreak had not been confirmed, would harm Australia's international trade. It is important that the press are informed immediately after the disease threat has been analysed and confirmed.

The Discussion Exercise

10. The major activity on the last two days of the study was the conduct of a discussion exercise to consider various aspects of the management of a major animal health emergency. A case study approach was used to develop a scenario, to act as a common framework for discussion by syndicates formed to consider and present their findings on selected aspects of the management of such an emergency. The discussion exercise is described in Annex E, and syndicate reports are attached as appendices to that Annex. Major findings from the syndicate reports have been included in the Study Conclusions below.

Closing Address

11. In his closing address to the study, the Director of the Australian Counter Disaster College, Brigadier I G C Gilmore, OBE said :

"When opening this Study, I said, 'I have been heartened by the considerable progress which has been made since 1980, in the state of preparedness to manage any exotic animal disease outbreak in Australia.'

The proceedings of this Study have strengthened that view. But I also said then, that there was no room for smugness and, suggested that we had a long way to go before we could feel confident that any exotic animal disease outbreak would be managed as effectively as it should be. Again the proceedings of this Study strengthen that view. Although we have come a long way, there is still a long way to go before this nation is well enough prepared to feel confident of its ability to cope quite effectively with a major animal health emergency.

The responsibility for continuing to progress along the road to prevention of, preparedness for, response to and recovery from major animal health emergencies does not rest with my Department, even though this is

the second animal health emergency study my Department has conducted at this College in recent years. Responsibility does rest, however, with some of your Departments at both Commonwealth and State levels. The primary responsibility at Commonwealth level rests with the Department of Primary Industry and is shared to some extent by the Department of Health. At State level, the Departments of Primary Industry or Agriculture appear to bear the responsibility.

Your deliberations of the last few days should have alerted you all to the need to continue to act positively in matters relating to animal health emergencies.

Our keynote speaker, Dr Bryan Woolcock, provided us with plenty of food for thought when he spoke of the changing scene. He warned of the danger of continuing to concentrate on responding to one particular form of animal health emergency - namely foot and mouth disease - and suggested it was time to prepare to respond to other natures of emergency as well. He warned also of changing social attitudes, and suggested that animal health emergency planners can no longer assume community tolerance towards mass slaughter of livestock as a tool of control. He suggested that environmental protection is now firmly impinging on legislation; and that we cannot attempt to ignore political influences. He stressed the over-riding importance of the legal aspects, because he observed the gradual ascendancy of administrative law over parliamentary responsibility: and cited such measures as the Freedom of Information Act, Ombudsman Legislation, the Administrative Appeals Tribunal and the Administrative Decisions Judicial Review Act. He suggested that, if veterinary authorities continued to destroy stock after having received a Court injunction, they could be deemed to be acting in contempt of Court; and proposed, that, in view of the hardening community and legal attitudes, there is a need to prepare alternative technical plans which involve different methods of control. His keynote address certainly set the scene for this Study in the manner the Working Party had hoped it would.

In support of Dr Woolcock's views, the Director of the Bureau of Animal Health, Dr Gee, said that 'legal injunctions and community interest are here to stay. Veterinary officers must be prepared to defend an 'over-kill response''. Dr Gee also suggested that, although new technology in the form of dormant vaccines would probably not be available for five years, its impending arrival should signal the need for reconsideration and, perhaps, re-orientation of existing procedures and attitudes. Insofar as heightening public awareness of the exotic

animal disease hazards and reaction to them are concerned, he considered that the use of television as the medium was likely to prove more successful than the use of print.

From the other presentations and discussions at this Study many important proposals have emerged. We were warned that, if you want to enjoy good press, you must have good diagnostic resources and evident ability to respond quickly. You have been warned by a veterinarian of the need to overcome the veterinary complex of trying to 'go it alone'; and advised to make the best use of all available resources. You have been advised to ensure that planning to combat a major outbreak of an exotic animal disease proceeds in parallel with planning to provide adequate support for the combat measures - which will include logistic, welfare, communications and transportation planning, to name but a few support aspects.

Mr Lloyd Beeby, of the Australian Meat and Livestock Corporation, told us of marketing contingency plans for an exotic animal disease outbreak. His presentation highlighted the dire consequences of a major exotic disease emergency to this nation as a whole, on our economy, living standards and lifestyle. He highlighted the inter-relationship of technological, economic, political and government, employment and international relations factors, in arriving at alternative marketing strategies. I commend his paper to you for further close study, and suggest that it should enjoy widespread distribution and publicity.

The level of community awareness of the danger and the costs of a major animal health emergency in Australia is, in my opinion, abysmally low. There is an obvious need to develop community awareness of the range of threats; and, in furtherance of this view, every course attending this College is shown the New Zealand Broadcasting Corporation's video-tape of a simulated exotic animal disease outbreak, which you viewed on Wednesday. That video-tape contains information of which all Australians should be aware.

Dr Broadbent offered us a comprehensive and valuable over-view of the present arrangements and trends for animal health emergency management in Australia, which was well supported by the various State presentations.

Doctor Salisbury and Mr Tremlett stressed the importance of training and test-exercising. We should all now recognise the importance of these measures: and

that in the absence of a real animal health emergency, you should all develop your systems, procedures, and organisations, train your organisations and test them frequently, to improve their operational efficiency.

Dr Snowden, who is Head of the Australian National Animal Health Laboratory in Geelong, prepared a paper on laboratory support in animal health emergencies which was delivered by Dr Tony Forman, and made a valuable contribution to our deliberations. In my own mind, I am still questioning whether it is in the national interest to shelve or defer debate of some contentious matters relating to laboratory support: and, from our short discussion relating to the importation of live FMD virus for research purposes, opinion within those assembled is obviously divided on this matter.

We heard very important presentations from Mr Belcher, on animal health emergencies arising from chemical incidents; and from Professor Boughton, on rabies. Both these subjects have emerged as possible contenders for separate, later studies, each in its own right. Dr Chris Bunn and Mr John Atkins delivered a case study on a recent animal health emergency exercise conducted in Victoria and, in so doing, set the scene for our major exercise.

A number of supporting papers were issued to you, and I commend them for your later study. They are :

Professor Douglas Whalan's paper on 'legal implications of exotic disease invasion into Australia.'

Inspector T D Jenkins' paper on 'exotic disease outbreak - the Police role.'

Mr M J Boland's paper 'exotic animal disease - media and PR.'

Inspector Bruce Bingham's paper - 'the role of support services in exotic disease emergencies.'

I wish to convey, on behalf of the co-sponsoring departments, my sincere thanks to everyone who prepared and/or presented material for our consideration at this Study. As well, I wish to thank the two New Zealand Government representatives for participating and contributing so freely and meaningfully to our discussions. I also wish to thank the Director of the Bureau of Animal Health and the Director General of the Natural Disasters Organisation for their support and for their attendance earlier in the week.

The members of the Working Party who prepared for and conducted this Seminar deserve, and I offer to them, my sincere thanks. Apart from our formal meetings in the months which preceded this activity, most of them have prepared and delivered meaningful papers during the Study. Dr Geering's paper and presentation on animal emergency disease threats to Australia contains data which are extremely useful, especially for non-veterinary members of the counter-disaster community who will be involved in planning for, and management of, animal health emergencies. Mr Roger Jones' presentations on the system for emergency management in Australia and on general operational problems and concepts were well conceived and received. So too, were the presentations by Mr Joe Barr and Colonel Ian Bryant, on Commonwealth physical support responsibilities of the Natural Disasters Organisation and the Australian Defence Force; as was Dr Roger Hall's paper on managing animal health emergencies information. I have already mentioned Dr Salisbury's contribution, through his paper on training and test-exercise needs.

For the work they have done to date, and in anticipation of their efforts in support of the preparation and production of the Report of Proceedings of this Study, I must thank the Secretariat, Mr Tony Davis and Mr Luis Pares: and the recorder, Mr Kevin Schneider. My domestic and administrative staff have, I believe, served you well in a number of ways and I thank them sincerely for their continuing effective performance in this manner.

I know that there is a danger in singling out people for mention for fear of omission. If I omit to mention anyone who feels special mention is warranted, it is by oversight and certainly not by design. However, there is one person present of whom I would like to make special mention: the representative of the National Rural Press Club and Australian Associated Press, Mr Patrick Lyons. In my seven years at this College we have conducted many studies on a wide range of subjects, to which media representatives have been invited. If they have accepted the invitation, their attendance has usually been fleeting and their display of interest limited. However, there have been two exceptions: the first was the Exotic Animal Disease Emergency Seminar in 1980, when Miss Sue Carney, a Canberra based journalist from 'The National Farmer', attended and made useful contributions throughout our deliberations; and this Seminar, where Mr Patrick Lyons has done likewise.

I am grateful to Mr Lyons for his presence and his contribution. His presentation this morning should be studied by everyone in the counter-disaster family, and the sound advice which he offered should be heeded - 'the key to good media relations is firstly to understand the media: and then, to know how to use them to your advantage'.

Gentlemen, we all should accept that advice, and recall, also, what Dr Schwarz said this morning when we discussed information management : 'you will never stop information flowing - you can only control the flow of official information'.

Finally, I want to thank you all for your attendance and participation. Your contribution from the outset has been relevant and meaningful.

Let me now remind you of what we set out to achieve. The aim of this seminar was to acquaint you with the current arrangements for managing major animal health emergencies; to consider selected operational aspects of countering animal health emergencies; to consider requirements and necessary arrangements for training and test exercising at levels to ensure effective response; and to give some consideration to the potential problems of the food chain.

Have we achieved what we set out to do? The answer is yes, we have - and we have done so through the pooling of knowledge and experience. In the same way - through the pooling of knowledge and experience - I would like to think that you will seek, in the future, to improve your own organisation's capabilities in the prevention, preparedness and response aspects of exotic animal disease outbreaks. As I said earlier this morning, 'effective liaison is the name of the game'. You should be aware now, if you weren't before you came here, of the importance of developing effective systems for information management; and that the testing of these systems is a vital precursor to successful operations. You should also be more aware of the need to provide for - and determined to ensure that proper provision is made for providing - reliable and current information to the media. You should also be aware of the dangers of planning in isolation, which I mentioned in my opening comments, and ensure that you make best use of all the resources which are available to assist you with your planning. The professional officers of the State Emergency Services, at State and regional level, are trained as emergency planners: and they are available to assist you. If your liaison with your SES has not been well developed, I suggest that you should take early action to foster it's development.

Where do we go from here? I believe you should take whatever action you see to be needed 'to get your own house in order': but, plan in conjunction with all the other relevant authorities - combat authorities and supporting authorities - to ensure you are prepared to combat a major animal health emergency.

From the Natural Disasters Organisation viewpoint, I believe that, while we have a part to play in the future, our role is essentially catalytic: our responsibility is limited to contributing to the development of an effective national counter-disaster capability. We are responsible for co-ordinating Commonwealth physical assistance, which may only be provided in response to specific requests for it from the States.

Since 1980 we have observed considerable improvements in Australia's counter-disaster capability, especially in its potential ability to manage a major animal health emergency. My hope is that this Study will motivate you to work towards producing a continuing improvement in this regard.

I hope my expectation 'that your attendance at the Study will prove to be a professionally rewarding and pleasant experience', has been fulfilled - for me it has certainly been a professionally rewarding and pleasant experience, for which I thank you all."

CONCLUSIONS

12. The Study noted the great progress made in planning and preparation for exotic animal disease since the 1980 Seminar. It encouraged the continuation of these processes and concluded that the following areas in particular, merited further study.

Planning

13.
 - a. A continuing need was identified to co-ordinate planning at all levels between both technical and support elements.
 - b. Plans should continue to be co-ordinated on a national, inter and intra/State Territory basis using standardised procedures and terminologies where practicable.

- c. Planners should take particular care to identify all available personnel and material resources required to combat an animal health emergency and to include primary producers, associated industries and vertebrate pest control authorities in the planning process.
- d. Plans should be framed to ensure that scarce veterinary personnel resources are not dissipated on the performance of tasks for which expertise is available elsewhere in the counter disaster community.
- e. In the preparation of plans, authorities should take account of possible adverse public and government reactions to certain accepted control measures and should make provision for the use of alternate strategies where these are practicable.
- f. Plans for dealing with animal health emergencies arising from chemical contamination incidents should continue to be developed.

Training and Test Exercises

- 14.
 - a. The study recognised that there must be a significant increase in funding by the Commonwealth, States and Territories to conduct training in a range of skills for personnel who will be involved in both combat and support roles during an animal health emergency.
 - b. There is a critical need to train veterinarians and administrators in :
 - (i) the decision making processes and priority assessments required to combat an animal health emergency; and
 - (ii) management aspects of conducting an animal health emergency campaign.

- c. The conduct of test exercises at all levels is an essential part of the training process. The study considered that in addition to field exercises, authorities could obtain considerable training value from the type of paper exercises variously known as command post, table top or telephone exercises.

Public Education and Information

15. The study considered that increased attention should be given to Public Education and Information Planning and operational aspects of an animal health emergency and concluded that :

- (a) there is a need for comprehensive briefing kits to be prepared on the major threat diseases for issue to media, industry and producer organisations as early as possible, and prior to any outbreak;
- (b) media involvement in planning and test exercises as well as regular media briefings during an outbreak, are vital; and
- (c) briefings and information releases at both Commonwealth and State level in any animal health emergency should be co-ordinated as far as is practicable.

Operational Information Handling

16. The Study considers that :

- (a) an improved awareness of available systems for the handling and operational information is needed; and
- (b) co-ordinated development of information systems is necessary to ensure compatibility of data within Australia.

Inter-State Liaison

17. The Study concluded that every effort should be made to facilitate and practise inter-State liaison mechanisms for managing an animal health emergency. This should include multi-State exercises.

Legal and Financial Aspects

18. The Study discussed the legal aspects of dealing with an animal disease emergency and concluded that:

- (a) animal health authorities should seek the standardisation of terms and legislation for animal health emergencies;
- (b) there is a need to review the provisions of other legislation such as that related to firearms control, environmental and wildlife protection, to reduce potential areas of legal conflict;
- (c) there is a need for review of the various penalties for contravention of existing Acts;
- (d) the question of indemnities and of workers compensation, particularly for personnel operating outside their own State or Territory, requires, attention; and
- (e) compensation, short term relief and long term rehabilitation measures for primary producers require examination.

Marketing Strategies

19. The Study noted the enormous potential economic and social impact of an animal health emergency and the consideration being given to marketing strategies and contingency plans by the Standing Committee on Agriculture. The Study concluded that such strategies and plans must be developed as a matter of urgency.

Rabies

20. The counter disaster response required to eradicate an outbreak of rabies in either an urban or rural situation was explored in a group discussion session. It noted a revised contingency plan for this disease has recently been prepared by working party of the NH and MRC. The Study concluded that:

- (a) there would be considerable logistic problems in implementing some aspects of the plan and that there are some unresolved technical problems, particularly relating to population reduction requirements and techniques for feral and native animal species in infected areas. It was noted that these problems

(a) contd

are being explored by national committees such as the Exotic Disease Sub-Committee and Vertebrate Pests Committee of the Standing Committee on Agriculture and the NH and MRC, supplemented where necessary by research at the Australian National Animal Health Laboratory and by vertebrate pest control authorities;

- (b) Detailed State and Commonwealth Plans should now be written by medical and veterinary authorities to define the role of all agencies that would be involved in a rabies control campaign. It was noted that local government authorities would have an important role in rabies control.

- (1) Now known as Animal and Plant Health and Quarantine Service;

- (2) 'Exotic Animal Disease Emergency Seminar, 2 - 7 March 19808 - Report of Proceedings', prepared and published by the Australian Counter Disaster College (Natural Disasters Organisation, Department of Defence), Mt Macedon, 1980. (ISBN 0 642 00207 0)

ANIMAL HEALTH EMERGENCIES STUDY11 - 15 MARCH 1985LIST OF ATTENDEES

Mr J M Allen	WA Dept of Agriculture
Mr P L Appleton	QLD Dept of Primary Industries
Mr J Atkins	Vic Department of Agriculture
Mr J Barr	Natural Disasters Organisation,
Mr L D Beeby	Australian Meat and Live-stock Corporation
Mr R S Belcher	Vic Dept of Agriculture
Mr T J Bergin	CWLTH Dept of Primary Industry
Mr J L Bickford	QLD State Emergency Service
A/Prof C R Boughton	The Prince Henry Hospital, NSW
Mr A H Bowman	National Farmers Federation
Mr B G Brand	Tas State Emergency Service
Mr D Broadbent	Australia Bureau of Animal Health
Mr J E Bromell	SA Dept of Agriculture
Col I J Bryant	Dept of Defence, Working Party Member
Mr P Buckle	VIC Ministry of Police & Emergency Services
Dr C Bunn	VIC Dept of Agriculture
Mr L A Butler	WA State Emergency Service
Dr C L Carroll	VIC Dept of Agriculture
Mr S N Carroll	NSW Dept of Agriculture
Mr G E Cerini	VIC Dept of Conservation, Forests & Lands
Mr G Chubb	NT Dept of Primary Production
Mr R E Cottam	QLD Dept of Primary Industries
Ch Insp M E Craft	Australia Federal Police
Ch Supt D Critchley	SA Police Department
Dr I Crothers	TAS Dept of Agriculture
Mr G Dark	NSW Dept of Agriculture
Mr S Day	NSW Dept of Agriculture
Mr J G Digby	Aust Bureau of Animal Health
Dr F R Doughty	NSW Dept of Agriculture Working Park Member
Mr G Fallon	NT Dept of Primary Production
Mr J M Flavell	NZ Ministry of Civil Defence
Dr A Forman	Australian National Animal Health Laboratory
Dr R W Gee	Aust Bureau of Animal Health
Dr W Geering	Australian Bureau of Animal Health, Working Party Member
Mr M Gorta	NSW Dept of Agriculture
Mr J Gunthorpe	ACT Parks and Conservation Service

Dr R W Hall	Australian Bureau of Animal Health
	Working Party Member
Mr W I Hamer	VIC Dept of Agriculture
Dr D G Harris	WA Dept of Agriculture
Mr D K Harvey	SA Dept of Agriculture
Dr J M Johnston	WA Dept of Agriculture
Dr D R Kerr	The Australian Veterinary Association Ltd
	WA Dept of Agriculture
Dr P B Lewis	ACT Emergency Service
Mr G Lincoln	National Rural Press Club
Mr P Lyons	Agriculture Protection Board of WA
Mr J C McSwain	QLD Rural Lands Protection Board
Mr P Merrell	VIC Dept of Agriculture
	CWLTH Dept of Primary Industry
Dr I R Morgan	QLD Dept of Primary Industries
Mr Gardner Murray	TAS Dept of Agriculture
Mr R E Nieper	VIC Dept of Agriculture
Mr H F Nichols	Working Party Member
Dr J R Salisbury	NZ Ministry of Agriculture & Fisheries
Mr G Schwartz	TAS Dept of Agriculture
	Working Party Member
Dr M E Sharman	NT Emergency Service
Mr E Simmons	University of Melbourne
Dr M J Studdert	School of Veterinary Science
	Australian Bureau of Animal Health
Mr J Tremlett	NT Dept of Primary Production
Mr T Usher	SA Dept of Agriculture
Dr R Vandegraaf	Conservation Commission of the Northern Territory
Mr P J Whitehead	NSW Police Department
	QLD Dept of Primary Industries
Ch Insp J Wilson	Keynote Speaker
Mr B Woolcock	Cattle Council of Australia
Mr E O D Wright	

ANIMAL HEALTH EMERGENCIES STUDY 11 - 15 March 1985PROGRAMMONDAY, 11 MARCH 1985

6pm Delegates assemble at ACDC

TUESDAY, 12 MARCH 1985

8.30 - 9 am Administration

9 - 9.30 am Opening Addresses
 AVM J D G Lessels, OBE BCE FIE (Aust)
 Director-General, Natural Disasters Organisation
 Dr R W Gee, Director, Australian Bureau of Animal
 Health
 Brig (Retd) I G C Gilmore, OBE, Director,
 Australian Counter Disaster College

9.30 - 10.45am The Background
 'Threat to Animal Health - A Review'-
 Dr W A Geering, ABAH
 'The System for Emergency Management in
 Australia' - R T Jones, ACDC

11 am - 12.15pm Keynote address
 Mr B A Woolcock, Director, Division of Animal
 Industry,
 Department of Primary Industry, Queensland

1.30 - 2 pm Discussion on Keynote Address

2.00 - 5 pm National Review - A Survey of Present Arrangements
 and Trends in the Management of Animal Health
 Emergencies in Australia
 'A Commonwealth Overview' - Mr D Broadbent, ABAH

State and Territory Summaries
 New South Wales
 Victoria
 Queensland
 South Australia
 Western Australia
 Tasmania
 Northern Territory
 Australian Capital Territory

7.30 pm Presentation
 'The Rabies Problem' - Outline of the problem
 and discussion led by A/ Professor C R Boughton,
 The Prince Henry Hospital, NSW

WEDNESDAY, 13 MARCH 1985

- 8.30 - 10 am Operational aspects
 'General Operational Problems and Concepts' -
 R T Jones, ACDC
 'Managing Animal Health Emergencies Information'
 Dr R Hall, ABAH
 'Chemical Contamination Incidents' -
 Mr R S Belcher, State Chemistry Laboratory, Vic
- 10 - 10.15am Group Photograph
- 10.30 am - Support Aspects
- 12.15pm 'Laboratory Support in Animal Health Emergencies'
 - Dr W Snowdon, ANAHL
 'Marketing Contingency Plans' - Mr L Beeby,
 Australian Meat and Livestock Corporation
 'Commonwealth Physical Support - NDO and the
 Defence Force' - Mr J Barr, NDO and Col I
 Bryant, JMOP
- 1.30 - 2 pm Discussion on Support aspects
- 2 - 3 pm Training and Test Exercise Needs
 Presentations by Mr J Tremlett, ABAH and
 Dr J R Salisbury, Vic, and Discussion
- 3.15 pm Major Exercise
 Briefing
 Formation of Syndicates
 Syndicate Consideration

THURSDAY, 14 MARCH 1985Major Exercise (continued)

- 8.15am- 12.15pm Syndicate Consideration (continued)
- 1.30 - 5.30pm Central Presentations
- 6.30 for 7 pm Study Dinner

FRIDAY, 15 MARCH 1985Major Exercise (Continued)

- 8.30 - 10am Central Presentations (Continued)
 Discussion
- 10.15 - 11.45 am Consideration of Conclusions of Study and
 Final Report
- 11.45am -12.15pm Closing Addresses
- 1.15 pm Delegates depart ACDC

THE NATIONAL REVIEW

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APPENDIX 1
TO ANNEX C

A Commonwealth Overview on the Present Arrangements for
Animal Health Emergencies.

D.W.Broadbent.
Australian Bureau of Animal Health

By definition Emergencies are events which occur suddenly, cause danger and, according to the Dictionary, may approximate a state of war. In the present context therefore an Animal Health Emergency is such an event which arises due to the actual or potential introduction to Australia of an animal disease which has not previously been known to exist on this continent. The corollary is that an Animal Health Emergency demands the sort of rapid concerted response which would be applied in a time of war.

Unfortunately disasters have become increasingly common in our modern high speed world and we have had to become ever more prepared to deal with them. Disasters which are of particular concern to Animal Health authorities may be divided into three groups.

- a. Natural physical disasters - bush fires, flood, drought, etc.
- b. Man-made physical disasters - chemical contamination, transport accidents, nuclear contamination, etc.
- c. Natural biological disasters - effects of pests and diseases.

The first two of these groups are already subject to contingency planning by several authorities and it is with the last that we are presently concerned. This overview will be restricted to one part of this group, that is the preparedness to respond to the disaster which would be occasioned by the introduction of an exotic animal disease to Australia.

Australia has been described in many respects as a lucky country"; this description is nowhere more apt than in reference to its relative freedom from animal plagues. Geographic isolation meant for a long time that an automatic quarantine was imposed on all our imports due to the very long sea voyage which was involved in reaching this country from the rest of the world. Although several animal plagues did reach Australia they were mainly eradicated before they could spread widely, largely because our animal population was still thin on the ground and was contained in discrete populations with little communication between them.

Quarantine services have long been established in Australia to erect barriers to the introduction of foreign disease agents. These barriers which have been very effective in preventing the ingress of pests and diseases, have relied on -

- importing animals only from "clean" countries
- testing animals for disease before export
- holding in quarantine for a sufficiently long time for disease to appear, and
- retesting for disease during Quarantine and before release
- prohibition of importation of potentially disease carrying materials and examination of all imported material to give effect to the prohibition.

Quarantine procedures can no longer provide such effective protection as they did in the past because of the overwhelming logistic problems which they face due to;

- large and ever increasing volume of importations.
- high speed air transport
- huge numbers of passengers arriving on aircraft simultaneously
- sophisticated transport methods (containers, jet aircraft, etc.)
- emergence of "new" diseases in many parts of the world.

It must be accepted that the probability of a breach of the quarantine barriers by an exotic disease becomes daily greater, due not only to these logistic problems but also to the increasing pressure from livestock breeders for importation of animal genetic material from sources which would not have been contemplated only a decade ago.

If an exotic disease were to be introduced the ideal response would include;

- 1- RAPID detection
- 2- RAPID efficient reporting to the authorities
- 3- RAPID accurate diagnosis
- 4- RAPID containment
- 5- RAPID coordinated application of effective planned control measures using all available resources.

It is readily apparent that the key to an effective response to an animal disease emergency is - SPEED

To mount a response rapidly (in a few hours) it is essential to have

- very detailed plans to implement all the 5 points listed above, and;
- an appropriate degree of training of everyone involved.

1. PLANNING

After the disastrous outbreak of Foot and Mouth disease (FMD) in Canada in 1952 concern was felt in Australia about the lack of plans for such an emergency in Australia. In 1955 the Commonwealth/States cost sharing agreement was developed by which the Commonwealth agreed to contribute 50% of the cost of control or eradication of an introduced exotic disease. However this arrangement covered only FMD and was conditional on the eradication measures having been implemented according to plans which were approved by Australian Agricultural Council (AAC). Over the next decade each State developed its own contingency plan for FMD. In the mid 60's the need to formulate contingency plans for other diseases and to improve coordination between the States and the Commonwealth was recognised and plans were drawn up for a number of the more important exotic diseases by State animal health staff. These plans were considered and sometimes amended by the Committee system of the AAC. By 1980 plans had been prepared and approved for most of the 16 exotic animal diseases which are currently included under the Cost sharing agreement. However these "model" plans have been prepared at different times and by different people and reflect the idiosyncracies of their authors. They are highly individual both in form and philosophy, some including only a statement of strategy while others contain a complete set of instructions for carrying out the prescribed field procedures.

Recognition of the deficiencies in this planning approach crystallised at the Exotic Animal Disease Emergency Seminar held at the Counter Disaster College, Mt. Macedon in March 1980. Since then a shift in attitudes has become obvious with the consequent development of the concepts of counter disaster planning put forward by the Natural Disasters Organisation. Most exotic animal disease planning authorities have accepted the need to formulate and exercise plans which take account of the large number of non-veterinary support groups which must be involved in an exotic disease eradication effort and of the crucial need for tight coordination. This has naturally led to acceptance of the concept that in emergency, specialist groups should each perform those functions in which they are particularly skilled. Although it may not appear to be so at first sight, this is conceptually a far cry from "vets playing soldiers."

The time is now ripe for a review of existing plans, organisation and training methods. In such a review there is the ideal opportunity and need for;

1. Utilisation of the philosophy of counter disaster planning which essentially means that each specialist functions only in his speciality with support groups being responsible for carrying out defined functions under the general direction of the coordinating animal health authority.

2. Uniformity in approach to plan formulation. This will provide;

- compatibility of field procedures, administration and training.
- coordination between the several States and the Commonwealth, facilitating inter-State assistance and action in a multi-State emergency.
- improved information flow and utilisation, through adoption of systems such as ANEMIS facilitating emergency situation analysis and retrospective evaluation.

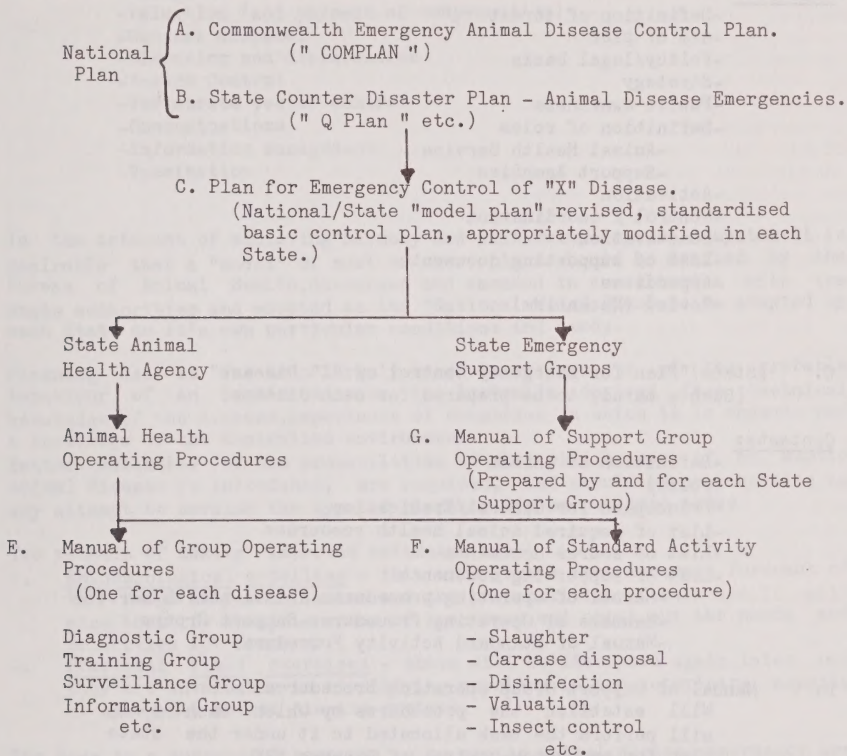
3. Improved efficiency of emergency response through;

- a detailed description of every role permitting a very rapid initiation of emergency response, a clear understanding of the sequence of action steps and the logic of their progression, and enhancing the ability of "imported" staff to fit straight into a role for which they are already trained.

4. A national Plan and a suite of interlocking State plans. These plans, based on a common set of definitions and formulated on an agreed common pattern would;

- be more readily and generally understandable
- more readily available
- facilitate training
- involve less paper.

An outline of a suggested scheme for animal disease emergencies which incorporates the previous points follows.



A . "Commonwealth Emergency Animal Disease Control Plan"
[This is a single plan to cover all exotic diseases]

Contents:

- Definition of threat
- Aim of plan
- Policy/strategy
- Legal basis
- Public awareness
- Definition of roles-Commonwealth/State
- Activation
- Coordination
- De-activation
- Rehabilitation
- Training
- Review (mechanism and responsibility)
- List of supporting documents

- B. " State Counter Disaster Plan - Animal Disease Emergencies"
 [This is a single (Counter Disaster) plan to cover all exotic diseases for the State]

Contents:

- Definition of threat
- Aim of plan
- Policy/legal basis
- Strategy
- Public awareness
- Definition of roles
 - Animal Health Service
 - Support Agencies
- Activation
- Control / coordination
- Deactivation
- List of supporting documents
- Appendices
- Review (Mechanism)

- C. [State]"Plan for Emergency Control of "X" Disease"
 [Such a manual to be prepared for each disease]

Contents:

- Definition of threat
- Policy
- Principles for Control/Eradication
- List of required animal health resources
- List of source documents
- List of supporting documents
 - Manual of Operating procedures-Animal health service
 - Manuals of Operating Procedures-Support Groups
 - Manual of Standard Activity Procedures

- D. Manual of Support Group Operating Procedures
 Will establish the procedures by which each Group will perform the task allocated to it under the State Plan for emergency control of Disease "X"

- E. [State]"Manual of Group Operating Procedures for Animal Health Services for Disease "X" "
 [.One for each disease]

Contents:

- Definition of organisational structure and responsibilities of individual officers
- Definition of authority of each group of officers
- Definition of chain of command
- Detailed description of tasks for each designation of officer - "Job Cards"
- List of resources required and responsibility for mobilisation of each
- List of Support Agencies and their contact points.
- List of Source documents, Technical Operating Procedures and Cross References
- List of Support Agencies "Operating Procedures".

F. [State] "Manual of Standard Activity Procedures-Animal Health Service.

[One for each Procedure]

- Slaughter
- Valuation (and payment of compensation)
- Carcase disposal
- Cleansing and disinfection
- Insect Control
- Vertebrate vector control
- Communications
- Information management
- Vaccination

In the interest of achieving harmony and uniformity in such a system it is desirable that a "model" of most of these plans should be drafted by the Bureau of Animal Health, discussed and amended in consultation with the State authorities and adopted as the "National Model Plan" to be adapted by each State to its own particular conditions and needs.

Planning has so far been largely based on assessments of the probable behaviour of an exotic disease in Australia derived from technical knowledge of the disease, experience of countries in which it is endemic and a knowledge of the Australian environment.

Better estimates of the probabilities of what will happen if an exotic animal disease is introduced, are required, and should be prerequisite to any attempt to develop the type of planning system outlined above.

Two methods of making improved estimates are;

1. Epidemiological modelling - this will give a more accurate forecast of the range of possibilities and the probabilities of each one. It will also identify specific areas of ignorance and point out the needs and priorities for research.
2. Practical field exercises - these will be discussed again later but they are invaluable in identifying problems in non-veterinary aspects of emergency animal disease control.

The keys to a successful response to an exotic animal disease emergency are

- speed
- coordination of action
- maximum utilisation of resources

Essentially this means that EVERYONE involved knows beforehand what to do, how to do it, and how the organisation works. EVERYONE in this case means all members of State and Commonwealth agricultural services + all members of all Support Agencies + all members of the public. When this scope of people is considered along with the range of activities which must be performed effectively and at high speed, the training requirement is staggering. Training must cover the political and financial decisions of Ministers and Senior Administrators, the decisions and actions of CVO.s and diagnostic experts and the contributions of stock inspectors, farmers, policemen, armed forces personnel, journalists and bulldozer operators to mention only some.

The full cooperation of the general public is essential to the success of any disease control action and is particularly important in emergency. Although education to increase public awareness is a specialised

form of training it must nonetheless be included in any consideration of training requirements for preparedness for an exotic disease emergency.

TRAINING.

Training will be considered in detail by other speakers but I will review it briefly here although there are so many aspects of training that it is impossible to cover them all in a short time.

The shift in attitudes which began to crystallize at the first Macedon seminar also pointed up some deficiencies in training. Previously training efforts had concentrated on animal health services staff, and had been insufficient. The counter disaster concept of emergency response involving the actions of a large number of specialised support groups identified many groups of non-veterinary personnel which were in need of training both in their particular requirements and in the systems of coordination needed in animal disease emergency situations.

Many individual officers of animal health services had received some degree of training through involvement in plan writing and development of state animal disease emergency preparations. Increasingly field training exercises have been held and recently some States have held them on an annual basis but no major exercise has been held in four of the seven States and Territories since 1980.

In the current financial year the Bureau of Animal Health has received a modest allocation for training and has been able to assist some State personnel to receive foreign experience of exotic diseases as well as mounting two short courses on exotic diseases for rural veterinary practitioners.

However, if the concept of uniform planning to improve coordination and the ability to provide efficient inter-State/Commonwealth assistance is accepted then coordination of training is also essential and exotic animal disease emergency training should be included in the curricula of veterinary science undergraduates, police trainees, economists, social workers etc.

Since the 1980 Seminar at Mt. Macedon, training has increased both in quantity and quality but has still largely been directed to groups which would be directly involved in the field and technical aspects of emergency response. Serious training deficiencies remain, not least in the groups at opposite ends of the spectrum

- Senior administrators and politicians
- Farmers and the general public.

Training of the first group should be designed to make it more aware of

- the magnitude of the threat
- it's role in preparedness (legislation, budget, training)
- it's role in the emergency response
- it's role in rehabilitation and adjustment in the aftermath

The second group urgently needs to be made aware of

- the nature and magnitude of the threat
- how a disease emergency will affect them
- their critical function in disease detection and notification
- what will actually happen in emergency and in the aftermath.

EXERCISING.

Exercising covers a wide spectrum of activities and methods which range from plan writing to full scale practice of an emergency response. Training of individual expert groups can be done easily and cheaply because it requires only modification of their existing expertise which can be achieved in small groups using methods such as "desk" exercises. However coordination is required to ensure that training is done, and that it dovetails with training offered to other groups.

These aspects of coordination, uniformity and dovetailing are well handled by a computer based training package. Such packages are being used overseas and it is opportune for development of similar training packages in Australia. As the scale and scope of training exercises increase, so does the cost, and cost appears to have been a serious limiting factor in holding large scale exercises in Australia. It must be recognised that large scale exercises are not merely training tools but that they also serve to;

- test plans (identification of deficiencies and impracticabilities)
- reduce overconfidence

The length of exercises is important in relation to this last factor because a 2-3 day exercise is frequently insufficient to allow the full complexities of a scenario to become apparent thus permitting confidence in the efficacy of the plan and the efficiency of the operators to develop unjustifiably. Experience indicates that a valid assessment of whether or not a full-scale exercise would have succeeded in a real situation requires the exercise to last at least 5-7 days. Cost factors have generally kept large scale Australian exercises down to approximately 3 days but the "foul-up" point is often not reached until the fourth or fifth day.

Longer exercises permit

- the full complexity of scenarios to develop naturally
- the appearance of all the practical realities eg, staff exhaustion, vehicle breakdowns, accidents, bad weather, public resistance, opposition from special interest groups etc.

In view of the high cost of such exercises it is essential to gain maximum benefit from them. This implies cost sharing between the States and the Commonwealth and the involvement of a maximum number of the groups which would be active in a real emergency response to simulate the longer term problems of, and to include, sections of the public such as farmers, pet and recreation animal owners, and business communities.

CONCLUSIONS

A. Since the Mt.Macedon Seminar in 1980, which crystallised the developing changes in attitude to emergency exotic animal disease control there has been;

- a continuing application of counter disaster concepts to preparations for disease emergencies
- increasing emphasis on a multigroup approach with specialist groups being responsible for their own specialised areas.
- recognition of the need to remodel existing plans on the basis of;
 - agreed,defined terms
 - a unified approach
 - integration of specialised support groups
- recognition of the need for greater coordination of emergency responses and the difficulties of achieving it.
- recognition of the need for maximum uniformity in planning and action while taking full account of the States idiosyncracies.
- an increase in training activity by both the States and the Commonwealth

B. Future activities should include;

- 1.Studies to improve forecasts of the probable behaviour of exotic diseases in Australia - simulation modelling and associated research
2. Revision of animal disease emergency plans based on agreed definitions to increase uniformity,effectiveness and coordination and to include the rehabilitation phase.
- 3.Acceleration of training activity with more attention to specialised support groups, senior administrators, farmers and the general public.Use of simulation packages and bigger longer field exercises should be investigated.
- 4.Search for improved funding.Since 1980 the Commonwealth and most States' budgets have included increased allocations for exotic animal disease preparedness but these funds remain inadequate. A greater effort is required to "sell" exotic disease to all branches of government and to industry. Exotic animal diseases pose the greatest threat to the livestock industries and it is in the industries' interest to contribute funds to help ensure an effective emergency response.

DEVELOPMENTS IN NEW SOUTH WALES SINCE 1980 -
STUDY ON ACDC MACEDON.

APPENDIX 2
TO ANNEX C

Task Force

New South Wales has maintained its Task Force approach to exotic disease operations and with the advent of regionalization within the Department a Task Force Structure has been developed in each of the five Agricultural Regions.

Each Task Force is under the control of the Regional Director of Veterinary Services and key positions, based on previous control Task Force structure, have been identified and staff selected for the roles defined. This has enabled more appropriate planning to take into account local risk and conditions and so facilitate a more rapid response to an Animal Health Emergency. Each Task Force would draw additional staff from other Regions in the event of a serious outbreak. Overall policy direction and co-ordination of major stores arrangements, finances and similar elements are retained centrally.

Each Regional Controller together with Senior Head Office personnel, have formed a Committee on Animal Health Emergencies. This Committee has met regularly to update activities, review and discuss planning as well as consider future activities.

The CVO has the responsibility for technical aspects of controlling an outbreak in the State. It is most important that uniformity consistent with operational requirements be maintained between Regions so that staff resources and techniques can be shared or co-ordinated as necessary. This sharing of information between regions is important and the intention is for any area which develops a specialist capability to assist other regions which have not been able to concentrate on that item.

Planning

Planning principles including written plans are more widely being adopted in various support organizations following the 1980 study at Macedon. In contrast with some other States, New South Wales does not have a single State disaster plan but rather each lead combat authority develops contingency plans which interlock with other services to meet any required situation.

New South Wales Department of Agriculture in conjunction with the State Emergency Service (SES) are preparing a State Counter Disaster Plan for Animal Health Emergencies.

Activities were pursued both within and outside the Department of Agriculture with the assumption that we will follow the various model control plans for the eradication of major exotic animal diseases. We have to ensure uniformity of planning between regions so that all regional plans intermesh to form part of the State plan.

Within the Department sub-plans have been considered for various sections at State level. A seminar was held on the legal service involvement in Exotic Disease Control following which some 30 areas needing attention were revealed. A sub-plan for the Legal Branch was produced by the Director of Legal Services.

Discussions have been held with other branches including Publicity, Personnel, Marketing and Economics, Biometrician and Management Services. A sub-plan for the Publicity Section is being considered at the moment.

Outside the Department close liaison is maintained with a number of organisations and further discussion will be held with these organisations prior to finalization of the State Counter Disaster Plan for an Animal Health Emergency.

At State level a permanent operational centre (EDOC) has been established on the 8th level in the McKell Building. This centre has the capability of expanding to meet the needs of various Animal Health Emergencies.

Procedures

The FMD extortion threat of January 1984 was used to give impetus to reviewing standing procedures within the Task Force Sections and between the numerous organisations which would be involved in an Animal Health Emergency.

This threat also offered opportunity to run an intensive Awareness Campaign for key groups within the Department of Agriculture as well as key organisations outside. This expansion from a predominantly veterinary involvement to include ancillary services under a real time scenario was quite beneficial. Individual organisational plans may well have been in existence but needed examination in relation to new or revised functions of these organisations.

Use of Electronic Data Processing (EDP)

The New South Wales Department of Agriculture has accepted a tender for the first stage of a major computing network to cover the whole State (AGNET). This system will ultimately intergrate many Departmental functions and a priority task to be established is the Animal Diseases Information System.

This Diseases Information System will be property based and gather data from laboratory, field and abattoir activities. In its development recognition of the benefits and shortfalls of other systems have been taken into account. At this stage computing is looked on as an adjunct of Animal Health Emergency Control and would be used in a number of separate fields. When the Departmental system is fully operational and proven elements will be drawn together to allow a greater EDP component to be developed in an animal health emergency.

ANEMIS has been accepted in principle but has not yet been fully tested by exercise.

Training

Some officers have been involved in overseas training including Foot and Mouth outbreak (Java 1983), fowl plague outbreak (U.S.A.1984), and special training school in exotic swine diseases (Singapore,1984). One officer had extensive training in South America in Screw Worm fly eradication.

An opportunity arose at short notice to undertake some co-ordinated feral animal control measures utilizing the resources of the National Parks and Wildlife Service and New South Wales Department of Agriculture. This exercise in the Willandra National Park, Western New South Wales allowed some aspects of the feral animal control plans to be tested.

Plague Locust Control campaigns in N.S.W. have provided an area for testing and developing operational skills.

Exotic Animal Disease Training Sessions/Seminars have been held in some regions. A number of these training sessions have allowed various sections of the Task Force to exercise, for example, communication field works etc.

Report by:

F.R. Doughty

Dr. F.R. DOUGHTY
Director, Animal Quarantine,
Division of Animal Health,
N.S.W. Department of Agriculture.

APPENDIX 3
TO ANNEX C

KEY DEVELOPMENT AND TRENDS. EXOTIC DISEASE PREPARATIONS IN VICTORIA.

Dr C L Carroll, Acting Chief, Division of Veterinary Field Service, Victorian Department of Agriculture.

Since the previous exotic disease seminar held in 1980, Victoria has substantially developed operational procedures for the operation of an exotic disease operation centre and regional emergency centre.

Three major exercises have been conducted, one of which will provide the basis for much of the programme of the seminar. These have provided an excellent opportunity to identify areas of critical risk with regard to the operation of an effective programme.

The need to have clear, simple operational plans has been reiterated by the exercises which have identified areas where further clarification of role definition and delegation of responsibility is required.

The importance of effective communications is now well recognised in Victoria. Procedures to provide for effective liaison with industry and the media are being developed and the need to develop an operational programme which encompasses these requirements is now well recognised.

It is well recognised that the success of an exotic disease eradication programme will depend upon support and commitment from the community and industry. Social, economic and political considerations will all intrude on the technical requirements to successfully handle a disease problem.

The Victorian Department of Agriculture now has a well established role within a State Disaster Plan. We are responsible for providing a support role in drought, bushfire and chemical emergency situations. The Department is the primary combating authority in the case of exotic animal disease emergencies. The Victorian Animal Disease Emergency Plan (VADEP) is now a sub-plan of the State Disaster Plan.

Experience gained by Department of Agriculture staff in practical situations since 1980, will also be of immeasurable value in the case of an exotic animal disease outbreak. Both bushfires and drought have provided the need for disposal of very large numbers of livestock quickly and safely and have involved the mobilisation of large numbers of Departmental staff. Experience gained in these situations provides excellent training to handle exotic diseases, and similar procedures and methods for many of the operations would be employed.

The need for early recognition and diagnosis of a disease problem and rapid, decisive action has been substantiated by training and exercises and experience in the natural disasters. In common with most areas of the Public Service, we are now being subjected to increasing demands for accountability of actions and justification for the use of our resources. In future, the ability to maintain inpetus in the area of exotic disease emergency training and preparedness will depend upon a recognition by Government of the continuing risk of exotic disease, and support from industry for such programmes.

There will be an increasing need to engender and sustain political support for government animal health services, unless we are unfortunate enough to suffer an occurrence of an exotic animal disease outbreak in the near future.

ANIMAL HEALTH EMERGENCY MANAGEMENT -KEY DEVELOPMENTS AND TRENDS IN QUEENSLAND

Mr R E Nieper Assistant Director, Veterinary Services,
QLD Department of Primary Industries.

INTRODUCTION

Since the previous Exotic Animal Disease Emergency seminar in 1980, a number of significant developments have occurred in exotic disease control planning within Queensland. The majority of these developments have been due to an ongoing commitment by the QDPI to maintain a state of preparedness and a capability to cope with any exotic disease emergency.

The recent extortion threats have had significant effects in terms of creating an awareness amongst all sections of the community, particularly at the political level. This recognition of the economic importance of the livestock industries has resulted in increased funding to enhance our capacity to handle an emergency.

The key developments within Queensland include:

- (1) Organisational Planning and Documentation of Plans;
- (2) Exotic Disease Planning Committee;
- (3) Regional Training;
- (4) Legislation;
- (5) Communications; and
- (6) Industry Liaison

Apart from these developments there has been an important trend which has progressively guided our way of thinking about emergency situations. This trend is encompassed by the phrase, managing the outbreak, where the emphasis is on control and co-ordination rather than just technical considerations.

ORGANISATIONAL PLANNING

Queensland is a very large State in which the animal industries vary from the intensive dairy/pig areas to the extensive beef areas where cattle may not be seen from year to year. The essence of our organisational plan is to have a task force of highly trained personnel which would be dispatched to the site of the outbreak and establish a field headquarters once an exotic disease was confirmed by a diagnostic team. This group would be supplemented by semi-trained personnel from the field.

The responsibilities of the FHQ is the containment of the disease in a defined area and the associated operational tasks required to eradicate the disease.

A second group would establish a control command centre called the Exotic Disease Operations Centre (EDOC) which is headed by the Chief Veterinary Officer, who has overall control of any emergency disease outbreak. EDOC is located in Comalco House, Brisbane.

Since the 1980 ED Emergency Seminar, close links have been established with the State Counter-Disaster Organisation (SCDO). Organisational planning has proceeded on two major levels.

State Level

A State plan called Q-Plan has been introduced and is now a sub-plan of the State Counter Disaster Plan. Q-Plan sets out the role and functions of QDPI as well as all other supporting organisations. It also documents the logistical and organisational procedures required to handle an emergency. Apart from standby and operational procedures, it also covers the formation of the command centres and the establishment of liaison with supporting organisations.

Regional Level

The second level of planning involves the documentation of procedures and tasks to be performed by officers at a regional or Divisional Veterinary Officer level.

Our regional area planning is designed to cover essential, local operations in a suspected or actual outbreak of disease for the first 24-36 hours. Given the large size of Queensland it is recognised that delays in getting FHQs operational will occur. Divisional Veterinary Officers have the task of documenting in their plans the essential contact points in other organisations, an assessment of available resources in terms of manpower and equipment, and a checklist of tasks to be performed by personnel in that local area. These plans are made in consultation with the Regional District Counter-Disaster Co-ordinator and the voluntary State Emergency Service.

Apart from the documentation of Q-Plan and our regional organisational plans, work is proceeding on the conversion of model disease plans to suit Queensland conditions. Wherever possible this task is being given to formal groups or committees comprising both departmental and industry representatives. An important aspect of this task is to ensure the practicability of the converted plan.

EXOTIC DISEASE PLANNING COMMITTEE

The number of people directly involved in exotic animal disease planning has increased with the formation of the Exotic Disease Planning Committee. This committee has a permanent size of five but can recommend that additional people be co-opted to undertake specific tasks. It is planned to enlarge this committee to include a representative from each animal industry. The committee approach has greatly increased the resources available for planning at the State level.

REGIONAL TRAINING

The QDPI's exotic disease training programme up until recently has been to conduct a number of exercises in South East Queensland to train the select task force of officers to establish and run a FHQ. This has largely been achieved but, following a four day exercise in Toowoomba in 1982, it was realised that we would soon run out of trained officers with veterinary expertise if the outbreak was a protracted one. Back up staff are essential.

A system to train staff in each of the nine QDPI veterinary divisions has been established. To do this, a minimum number of intensively trained officers (the core management group) are used in the exercises to man the key positions in the FHQ. All other positions are then filled by untrained officers from the region in which the exercise is being held. In due course, most field officers will have had some positive exposure to exotic disease procedures ensuring that an adequate supply of trained officers is available if more than one FHQ is needed in an outbreak.

The emphasis of training is now on the administration required in an outbreak rather than concentrating solely on technical aspects. The establishment of a permanent EDOC in Brisbane in late 1984 will also provide an opportunity to train a greater number of officers in the managerial and communication aspects of disaster management.

Within the last few years a number of officers have been sent overseas for valuable exotic disease experience and technical and administrative personnel have been sent interstate to participate in simulated exercises.

The most recent trend in terms of training has been the involvement of a number of supporting organisations in the preparation of and participation in simulated exercises.

LEGISLATION

The most significant advance in the preparedness for an exotic disease outbreak in Queensland was the promulgation of the 'Exotic Diseases in Animal Act' in April 1981. This act consolidates the powers required to handle an outbreak which previously resided in three separate acts and provides for the control, eradication and prevention of exotic diseases in animals, the compensation of owners for loss or destruction of animals and property and the establishment of an Exotic Disease Expenses and Compensation Fund.

COMMUNICATIONS

Effective communications between EDOC, FHQ and the various field teams are essential to the effective handling of an exotic animal disease emergency.

The Exotic Disease Operations Centre has been designed to include an STD telephone system, telex and facsimile facilities and a computer network.

The FHQ is designed to be equipped with HF, UHF/VHS radio transmitters, STD telephones facsimile and computers. The telex communications in EDOC are maintained to link into the mass media telex network.

INDUSTRY LIAISON

In early 1984 the Minister for Primary Industries initiated the formation of a joint industry-departmental liaison sub-committee to provide an effective liaison between the DPI and all livestock industries in relation to exotic animal diseases.

It has been given the task of making recommendations to ensure the most efficient and effective means of informing the livestock industries of developments associated with the technology, planning and administrative aspects of exotic animal disease. It also gives the livestock producers the opportunity to include their ideas and considerations into departmental planning and training.

TRENDS

MANAGING THE OUTBREAK

Exotic disease planners and administrators within Queensland have recognised the importance of managing an outbreak of disease rather than relying on the belief that technical solutions will, by themselves, bring any emergency situation under control. Technical considerations are indeed important but they are just one of a number of aspects of planning which deserves attention.

The emerging trend within Queensland is to concentrate on the procedures to co-ordinate and control an outbreak. This recognises the role that other organisations will play in the provision of technical expertise, manpower and equipment. Greater emphasis is being placed on training of senior staff to manage an emergency at both EDOC and FHQ levels.

Another important trend is in the utilisation of veterinary expertise in an outbreak. This will be used to initially set up the FHQ but will quickly be phased out into veterinary field activities rather than continue to perform duties that do not require veterinary training.

Planning to date has established communications with organisations capable of supplying the resources required. These have been documented in Q-Plan. We are now concentrating on developing and documenting plans on a local, regional level.

KEY DEVELOPMENTS AND TRENDS IN EXOTIC DISEASE PREPARATION IN SOUTH AUSTRALIA

Some of the major geographical and administrative problems confronting South Australia were presented by Dr. Barnett here in March 1980. This presentation will update that information and highlight some of the organisational developments in South Australia during the last five years.

Physical Problems

Most of South Australia's geographical problems remain with us; climate and topography don't change all that rapidly. However one or two significant changes have taken place - first, most of the remote northern region is now fenced and cattle numbers have been substantially reduced in BTB destocking programs. Communications have been improved with installation of a highly efficient HF radio system based at Port Augusta. Work continues on the Stuart highway which, by the end of 1985, will be sealed (except for 200 km) from Port Augusta to Alice Springs. Modern stock movement by rail and road have replaced the traditional methods but Adelaide market still remains a major "drain-hole" for the cattle industry in southern areas of the Territory and Queensland as well as South Australia's pastoral north.

Outport facilities have improved with installation of macerator sterilizers at Wallaroo, Port Lincoln and Thevenard (Ceduna).

At the same time we have become a higher-risk target for exotic diseases with the acquisition of an International airport.

Organisation and Administration

After some years of deliberation and confusion, the State Disaster Act in South Australia was amended in late 1984 to include Agricultural Services as a major functional service under the State Disaster Plan. In addition the definition of "disaster" has been amended to ensure the inclusion of epizootics of animal disease. A subplan (Exotic Disease, Animals) has been prepared to the draft stage by Dr. Barnett on SAGRIC's behalf as the primary combat authority. This plan has "alert" (standby) and operational stages and can be activated with or without declaration of a disaster. It would be activated in conjunction with the more detailed procedural document, the South Australian Vesicular Diseases plan. Job cards for EOC, REC and field action units and individual positions are currently in preparation.

Training

A field exercise was run in March 1980 to simulate a Newcastle Disease outbreak in poultry in the Barossa area. Apart from that no field training of staff has been carried out. During 1983 and 1984, senior veterinary staff from SAGRIC have attended Victorian exercises at Pakenham, Yarram and Cohuna; one veterinarian observed aspects of the FMD eradication program in Central Java in 1983 and another spent three weeks in Singapore in 1984 studying pig and poultry diseases exotic to Australia.

A field exercise on FMD is planned at Mount Gambier on 12-14 June 1985.

At the last seminar here in 1980, the Tasmanian speaker, Dr. Sharman, identified a problem shared by many State departments but particularly the smaller organisations. It relates to the constant turnover of staff (particularly veterinarians) and the enormous expense of running training programs, especially outbreak simulations. South Australia's state budget for animal health is enmeshed with (and dependent on) its budget for other agricultural functions such as extension and research. The scope and emphasis of exotic disease training must be carefully planned for maximum cost-effect.

The field veterinary service in South Australia is slowly developing in the face of declining resources. The regional system of administration of animal health is surviving but it must be remembered that half the force of 16 field veterinarians is temporary and funded principally by the BTB program. Successful management of an exotic disease program in South Australia will therefore be dependent on commitment and preparation of staff from a range of work areas in SAGRIC.

RV:MAS
8/3/85

(DR. ROBIN VANDEGRAAFF)
REGIONAL VETERINARY OFFICER

ARRANGEMENTS AND TRENDS IN ANIMAL HEALTH EMERGENCIES -
WESTERN AUSTRALIA

Dr D G Harris, Principal Veterinary Officer (Disease Control),
Animal Health Division, WA Department of Agriculture.

One of the main factors influencing exotic disease planning in Western Australia is the size of the State; an area of just under one million square miles in which we could comfortably relocate Victoria, New South Wales, Tasmania, and the north and south islands of New Zealand and still have space left over for a major remote area exercise.

Planning to deal with exotic disease emergencies in an area of this size poses significant problems. We have to plan for an outbreak in remote pastoral areas, where early detection and eradication of an exotic disease may be impossible or, at least, very difficult; as well as more conventional planning to control an outbreak in the agricultural areas of the State. The size of Western Australia, with its extensive remote areas, presents extraordinary problems in relation to logistics, resources management, communications and co-ordination of emergency responses.

We are fortunate in Western Australia in that exotic disease planning and training activities enjoy a high profile. Exotic disease preparedness ranks high in the aims and objectives of the Department of Agriculture and attracts a significant staff resource and a generous training budget of \$20,000 to \$25,000 a year.

The aim of the exotic diseases programme in Western Australia is to maintain an on-going process of review and updating of the exotic disease plans, based on the experience of biannual regional field exercises. Five Departmental regional task forces are being developed, each capable of setting up a Regional Emergency Centre and operating independently for the first 48 hours of an exotic disease emergency.

Planning is conventional; a series of State exotic disease plans or, as we prefer to call them, Manuals of Procedures, based on the national model plans. These include:

The Vesicular Diseases

Rabies

Newcastle Disease and Avian Influenza

Swine Fever and African Swine Fever

Rinderpest

Bluetongue

Screw-worm fly

All of these plans are pre-Macedon 1980 vintage and should now be reviewed and redrafted as technical manuals, in support of an overall counter-disaster plan for animal health emergencies.

In addition, much of the content of the disease plans dealing with standard techniques (e.g. stock inspection, valuation and compensation, destruction, disposal and disinfection) is needlessly repetitive and should be edited out and published separately, as reference manuals or standard operating procedures (SOP's).

The State Exotic Animal Diseases Emergency Plan (SEADEP) is a standard State counter-disaster plan, detailing the arrangements to prepare for and deal with an exotic disease emergency in Western Australia. The plan clearly establishes the Chief Veterinary Officer as the person responsible for the overall control and direction of an exotic disease campaign and the Department of Agriculture as the "lead combat force". Ten other State and Commonwealth government departments and agencies have accepted clearly defined roles and responsibilities in an exotic disease emergency.

Support plans are being developed for:

- . Finance
- . Communications
- . Public relations and public information
- . Quarantine security

The most important aspect, in Western Australia, of the shift from in-house animal health authority plans to counter-disaster planning for a community response to an exotic disease emergency, has been a widening of the response capability in the Department of Agriculture. Regional task forces now draw on the skills of all disciplines of the Department - not just from Animal Health Division. The entire Department is now involved in exotic disease emergency planning and training.

One of the first lessons we learned from training exercises was that veterinarians are our scarcest resource. We accepted, very early, that the skills of veterinarians should not be squandered on emergency tasks, which, although they may require high levels of management and organising skills, do

not require the special skills of the veterinarian. Early diagnosis and epidemiological investigation are almost certainly the keys to rapid control and it is in these areas that we find we are able to make the most effective use of veterinarians. In past exercises we have employed veterinarians as infected property managers, in organising area quarantine controls and even filing case reports in Regional Emergency Centres. This was an extraordinary waste of veterinary manpower.

It may be an heretical suggestion for this particular audience, but a case could be argued that there is little or no place for veterinarians in the considerations of syndicates 2 to 6 for the major exercise scheduled later this week. Certainly in Western Australia we have learned to draw on all disciplines of the Department and to take full advantage of the special skills and expertise of the Agricultural Scientists in setting up a task force. In a Regional Emergency Centre, the field EHQ in the Western Australian system, only the Controller and his deputy and the Investigations Officer(s) are veterinarians.

PRESENT ARRANGEMENT AND TRENDS IN THE MANAGEMENT OFANIMAL HEALTH EMERGENCIES IN TASMANIA

Reported by M E SHARMAN
Chief/Veterinary Field Branch
Tasmanian Dept of Agriculture

Introduction

At the Mt Macedon seminar in February 1980, Mr Barry Ryan reported on the outbreak of vesicular disease at Legana. A number of areas of weakness in our control procedures were documented in the Seminar Proceedings. All of these problems have been addressed and since then progress has been made in counter disaster arrangement which include the following:-

Planning

The strategies for the control of disasters in Tasmania are contained in the State Disaster Plan. The State is divided into three regions and each region has its own Regional Disaster Planning Group.

The Department of Agriculture has a veterinary representative on each group and monthly meetings are held where plans, training, exercises etc. are discussed.

Represented in each Regional group are officers from Police, SES, municipal councils, fire brigade (urban, rural + forestry), ambulance, telecom, HEC, Regional Master Planning Authority, Welfare Organisations, Medical Departments, the Department of Agriculture and the Dept of Construction. Good co-operation exists and the development of plans has proceeded reasonably smoothly.

Within the area of exotic disease the following plans are available:-

- (1) The Exotic Animal Disease Special Plan. This is a part of the State Disaster Plan and outlines roles and responsibilities of various organisations.
- (2) The Department of Agriculture Standing Operational Procedures. This outlines the role of the Department of Agriculture.
- (3) The Bureau of Meteorology has prepared a plan for it's role in the control of airborne exotic disease.
- (4) Model control plans or manuals of procedures for specific diseases.

Training and Exercising

A sophisticated computer Property Identification System has been developed which will identify properties, their location and type of enterprise. The data base is extensive and very useful.

The ANEMIS system of recording information has been adapted for use on microcomputers.

Training programs have been undertaken with Veterinary Officers, field officers and other Department of Agriculture staff.

A seminar was held at the Tasmanian University with the Tasmanian Division of the Australian Veterinary Association.

Assistance with some training has been given by Dr Salisbury of the Victorian Department of Agriculture.

A table top exercise was conducted this year in order to test the effectiveness of our plans.

This type of exercise is extremely important because unless we constantly train staff to a high degree of efficiency (at considerable cost) there will inevitably be a problem of having to use inexperienced operators, when an emergency occurs. Plans should be thorough, simple and easy to use. A table top exercise is a cheap and efficient way of testing the viability of plans and should be undertaken before a large scale field exercise is contemplated.

In 1983 I had the privilege to attend the Foreign Animal Disease training school in USA. The training methods used were first class and it is hoped they will be adopted by ANAHL when it is in a position to undertake training of veterinarians.

Public relations

Liaison has been established with:-

The State Media Committee

The Minister for Primary Industry and his press secretary

The Premiers Department

The Department of Agriculture Information Service

The Tasmanian Farmers and Graziers Association Animal Health committee

Because personnel in these organisations change quite frequently there is a need for regular briefings.

General

Tasmanian legislation has been altered and we now have a much more efficient system to control swill feeding.

There is a continuing effort to improve our Exotic Disease control capability.

DEVELOPMENTS SINCE 1980
IN THE NORTHERN TERRITORY

Mr G Chubb, Veterinary Advisor, NT Department of
Primary Production

I intend to present a brief review on recent developments in the N.T. For those unfamiliar with the industry in the Territory, the proceedings of the last seminar in 1980 are very informative. Briefly, though, the extensive nature of the industry almost ensures that an exotic disease, be it Newcastle disease, Screw Worm Fly, Rabies, or a Vesicular disease, will not be detected before the outbreak is extensive. Stocking rates of cattle are low, and though pig numbers are small, local densities are such that vesicular diseases would present great problems, both in diagnosis, and eradication. Resources available for use in an outbreak are small by comparison with the huge areas of coastline, pastoral land and uninhabited bush which are encountered in the Territory. The Humpty Doo incident was fortunate to have occurred so close to a major centre - or maybe that was the reason the condition was spotted so early!

The possibilities and routes of entry for the various diseases have been covered by Drs Geering and Woolcock - they apply as well to the Territory as anywhere else, though concurrent with low stocking densities, chances of transmission are also low. The four diseases already mentioned are the most likely introductions - in fact a species of Chrysomia was introduced with two Indonesian vessels last week. Fortunately it was one already present in the Territory. Fortunately, too, an adult *C. bezziana* is unlikely to survive such a voyage. Bird feathers were confiscated from the same vessels. It is not known if live poultry had been on board during the voyage.

The Humpty Doo incident mentioned before illustrated a few things, not the least being how difficult it would have been had the outbreak been further afield, further advanced, in uncontrolled country. The logistics of such an exercise in those conditions leave one in awe. We hope to address the problem with a training exercise in the near future. Also there is the problem of just maintaining normal operations during an exotic disease outbreak.

The risks presented by itinerant vessels - both pleasure and fishing boats is also real. I wonder just why the Indonesian vessels were actually brought into Darwin harbour, and why illegally introduced cats (from Malaysia) were allowed to be quarantined in Sydney.

Things are not all bad. Our communications since 1980 have improved drastically, to a HF SSB mobile radio network which literally encompasses the Territory. It has already proven invaluable in coordination of staff and promises to improve as people get used to the facility of organisation it offers. We have also, the highest staffing levels in the animal health fields ever, thanks to BTEC. Support from other departments - e.g. Police, Emergency Services, Conservation Commission and the Armed Services were demonstrated in the recent (abortive) monkey hunt, and the experience in cooperation gained was invaluable. Media liaison was handled successfully by the police liaison unit and the whole exercise was well treated by the media. Livestock are as well controlled as they have been in the last 20 years excluding, of course, the gigantic feral animal problem. Due to the extensive nature of the industry, normal means of capture and/or destruction are not as successful as they are in more intensive areas. DPP, in conjunction with Conservation Commission N.T. is currently planning a survey/control exercise on feral pigs which will take place over the next three years.

Screw worm fly traps situated at strategic intervals along the coastline are monitored monthly - so far no introductions have been noted. A counter disaster plan for exotic diseases has been prepared by Emergency Services. Our plans and technical manuals for the various disease will be formulated to dovetail into that counter disaster plan.

To sum up, it could be said that while the risk remains the same, the limited amount of experience we've had with suspected outbreaks has created a real awareness of the problem, and opened avenues into ways of dealing with an exotic disease outbreak.

The Position in the ACT in Relation to Preparedness for

Eradication of Exotic Animal Disease.

Mr John Gunthorpe
Policy & Projects Branch
ACT Parks and Conservation Service
Dept. of Territories

The responsibility for eradication of an exotic animal disease outbreak in the Australian Capital Territory (ACT) rests primarily with the ACT Parks and Conservation Service, a division of the Commonwealth Department of Territories.

The ACT is land locked within New South Wales, except for the Jervis Bay Territory which is essentially a nature reserve and free of farm animals but not dogs. The ACT covers about 600,000 ha. and comprises in area about one quarter urban, one quarter rural and half national parks and native reserve.

Most of the rural leases in the ACT are considered economically non - viable and run predominately sheep. There are also about 4000 horses and fewer cattle. There are virtually no domestic pigs. However, in the national park, and on some rural leases feral pigs are prevalent periodically. Numbers of feral dogs, goats, horses, deer and cats occur in the national park. Pigs and goats are actively controlled.

ACT Parks and Conservation Division has an operational role equivalent to State functions in departments of agriculture, environment, forestry, lands and national parks and wildlife, as well as a local government function equivalent to shire and pasture protection board, in the context of this study.

No contingency plans have been prepared in the ACT to-date and there have been no field exercises. It is significant that ACT involvement is fragmented with the ACT Veterinary Service, a single veterinary officer located in the Bureau of Animal Health, while the responsibility for these areas of stock and feral animal management and control lies within the Department of Territories.

The preparation of a contingency plan for the ACT rural area has been initiated with co-ordination by the ACT Emergency Services. The Service has available a well appointed operations centre and the Department is well placed for appropriate resources to be integrated in a field operation.

Policy dictates that the ACT maintains an independent authority in relation to eradication of an exotic animal disease outbreak in the ACT. Nevertheless, there would be need for secondment from and co-operation with BAH and NSW authorities, particularly as an outbreak in the ACT would immediately involve NSW in restricted areas.

Co-operation with NSW authorities in development of a compatible plan and involvement with some exercise activity is desirable.

PRESENT ARRANGEMENTS & TRENDS IN THE MANAGEMENT OF ANIMAL
HEALTH EMERGENCIES IN NEW ZEALAND

Mr G Schwarz, Veterinary Staff Officer

Ministry of Agriculture & Fisheries, New Zealand

For many years there have been well developed and defined programmes for the control of vesicular diseases should they occur.

These control plans would act as a basic model for suitable amendments should other serious but less rapidly spreading exotic diseases occur.

LEGISLATION

The NZ Animal Health Division has the authority to control and eradicate any of the diseases scheduled in the "Animals Act 1967". This act also provides special provisions for the control of F.M.D. and the authority to produce controlling regulations.

It is considered that the act contains sufficient authority for the control of animal diseases and no major changes to the legislation are contemplated or deemed necessary.

MANUALS

Following the 1967 out break of F.M.D. in the UK the NZ manual for the control of vesicular diseases was rewritten with precise and detailed instructions on how to respond in specific situations.

Later this was considered to be too restrictive with no allowances for use of initiative and in 1975 the rewriting of the manuals in the form of guidelines commenced.

At the "Tempura Incident" in 1952 when a suspect case of F.M.D. was reported and full control measures were invoked it became evident that there was a need for certain specialised instructors and that levels of authority and decision making had to be clearly defined. Consequently the manuals are being amended to accommodate these new requirements.

USE OF OUTSIDE AGENCIES

The "Temura Incident" confirmed our beliefs that it is essential to use outside organisations whenever possible. We now utilise wherever possible the special expertise of other people and organisations and retain the Veterinarians special expertise to perform duties within their areas of competence.

TRAINING

Up to a few years ago all training for exotic disease control was centralised to ensure standardisation. Personnel were trained for a multiplicity of jobs, so that when required they could carry out any specified task. This has been found to have certain deficiencies, and we are now giving centralised training for middle and upper management to ensure a standardised approach and allow for rapid deployment of fully trained staff for specific positions. The regions are responsible for training their own staff in routine operations.

The retraining of veterinary practitioners has started. We are concentrating on two facets which we consider are essential, ensuring they can recognise a suspicious case of a vesicular disease and then following the correct post examination procedures.

It is hoped that the majority of practitioners will have been through this one day course by the end of next year.

FUTURE

It is proposed to continue with the ongoing updating of procedures and manuals for F.M.D. control and to progress further with specific procedures for control of outbreaks of Newcastle Disease, avian influenza and classical swine fever.

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Exotic Disease Threats.

W.A.Geering,

Australian Bureau of Animal Health.

Introduction.

Australia has an extremely favourable animal health status and remains free of many livestock diseases that cause serious production losses, interfere with international trade in livestock and livestock products and/or cause public health concern in other parts of the world. Quarantine is our first line of defence against the entry of these diseases. However the increasing international mobility of people, animals and goods places great pressures on national quarantine services. It is therefore important that we have a well developed second line of defence in the form of contingency plans so that we can eradicate any disease that breaches our quarantine barriers quickly before it has a chance to become well established.

Rather than try to cover the full range of exotic disease threats in this presentation, five exotic diseases have been selected for detailed consideration. These have been chosen not only because they are serious exotic disease threats but because between them they encompass a wide spectrum of types of threat and counter disaster responses that would be required to combat them.

Foot-and-mouth Disease.

Foot-and-mouth disease remains the exotic disease which causes greatest concern to animal health authorities and farmers alike in Australia. It is the disease around which our entire counter disaster planning for exotic animal diseases has been constructed.

Why is FMD accorded such prominence in our thinking? Part of the answer to this question lies in the highly contagious nature of the disease and the production losses that occur in affected herds and flocks. FMD is not a very lethal disease, except in very young animals. However the painful lesions in the mouth, feet, udder and other sites cause a debilitating disease with loss of meat, milk and wool production. More than anything, however, FMD is a trade loss disease. FMD-free countries either maintain a complete or partial ban on the importation of 'risk' livestock products from infected countries. The main consequence of introduction of FMD to Australia would be loss of meat exports to our major markets in North America and Japan. Various estimates of the economic consequences of FMD in Australia have placed the loss to the nation in the first year after the discovery of the disease at up to \$2500 million. It is

not possible to state with any certainty how long it would take for us to be able to resume exports after the last outbreak as this is largely at the discretion of importing countries. However a minimum of six months could be expected.

The current world distribution of FMD is shown in figure 1. Despite the availability of improved vaccines over recent years the incidence of the disease remains at high levels over much of Africa, Asia and South America. In terms of risk to Australia, there are some bright spots. Europe has always been a high risk area for Australia because of our strong ethnic links. The incidence of FMD in Europe has declined sharply over the last 20 years and an outbreak of FMD is now a rare event in many of the countries there. However there are two sides to the coin. Whilst this decreases the risk of entry of FMD to Australia, it also makes Europe more competitive on world beef markets. The other bright spot is the situation in Indonesia, the closest country to Australia in which FMD has been endemic. Indonesia is well advanced on a national FMD eradication programme, which has been carried out with Australian assistance. Despite a recrudescence of the disease in Java in 1983 there is every promise that the disease may be eradicated from the country in the not too distant future.

FMD could enter Australia in one of several ways. The virus can survive for considerable periods in some animal tissues and potentially contaminated meat products brought illegally into the country constitute one of the highest risks. The most likely way that a transmission cycle would be completed with such products would be by feeding them to pigs. There is a nationwide ban on feeding swill containing animal products to pigs, except under the most rigid controls. If this ban can be strictly enforced the risk of entry of FMD, as well as a number of other meat borne viruses such as African swine fever and swine vesicular disease would be very markedly reduced. FMD could also be introduced by smuggled animals or germplasm or possibly by contaminated clothing or equipment. The recent extortion threats have added a new and somewhat sinister dimension to our risks. Animal health authorities in Australia are quite rightly trying to have as little publicity given to this method as possible.

Our policy would be to eradicate an outbreak of FMD by identification of infected or dangerous contact properties by intensive clinical surveillance and epidemiological investigation; slaughter and safe disposal of susceptible animals on these properties; disinfection of infected premises; quarantine procedures and tight control over the movement of livestock and over the operation of risk enterprises, such as abattoirs and milk factories. If we are faced with a large, multi-focal outbreak our resources will be stretched to the limit. Eradication campaigns will also be further complicated if feral animals, such as feral pigs, are potentially involved.

Rabies.

The second exotic disease threat for consideration is rabies. This is a disease to which all mammalian species, including man, are, to a greater or lesser extent, susceptible and which is

almost invariably fatal. Rabies has struck terror into the hearts of man for thousands of years. Even the origin of the word is lost in antiquity. Whilst it has come to us from the latin 'rabere', it appears that the Romans may have adapted it from the much older Sanskrit word 'rabhas' which means 'to do violence'.

Australia remains the only major land mass free of rabies except Antarctica. The current world distribution of rabies is shown in figure 2. Whilst man most commonly comes into contact with rabies through canine transmitted disease, certain wildlife species are responsible for perpetuating the disease in various parts of the world. Some important reservoir species are foxes, wolves, jackals, pariah dogs, mongooses, skunks, raccoons and some species of bats. The 'wild' animals that may be important in sustaining rabies in Australia include foxes, dingos and feral dogs and cats. The potential role of native fauna is unknown. It should be noted that no country that has a substantial reservoir of infection in wildlife has ever succeeded in eradicating rabies.

Introduction of rabies to Australia would have serious public health implications as well as animal health consequences. International statistics for human rabies mortalities are notoriously unreliable but the best estimate is that more than 50,000 die from this disease in the world each year and many, many more are subjected to prolonged immunisation therapy after dangerous animal contacts in endemic countries. To this must be added the individual suffering and public alarm that may be associated with rabies. Therefore, whilst animal health authorities would be the lead combatting agencies in a rabies control programme, they would need to cooperate extremely closely with the medical authorities. It is thus very appropriate that Professor Boughton, Chairman of the Communicable Diseases Committee of the National Health and Medical Research Council should be present at this Study.

Rabies virus is very fragile and survives poorly outside the host. It is transmitted to a new host by contamination of a fresh wound by infected saliva, usually by the bite of a rabid animal. There is then a long and variable incubation period, which may extend from a matter of days to months, before clinical signs of the disease appear. There is no way of diagnosing the disease in the incubative stage.

For all practical purposes, rabies could only be introduced to Australia by means of a live infected animal. Quarantine procedures for imported animals are adequate to prevent the introduction of rabies but there is a risk from smuggled or otherwise illegally introduced animals. One important risk area is pet animals on international yachts and other craft that call at fairly inaccessible spots along our northern coastline. In this context it should be noted that South-east Asia has one of the highest incidences of rabies of any region in the world. One saving grace is that the Indonesian islands east of Java seem to be free of the disease.

The type of counter-disaster response required for an outbreak of rabies in Australia would be, in many respects, quite different to that for a disease such as FMD. Urban communities

are more likely to be involved than rural communities and control actions will be centred on companion animals and feral animals rather than farm animals. In these circumstances the traditional disease control methods of preventing the uncontrolled movement of animals in the infected area and maintenance of a quarantine barrier around the infected area will be much more difficult to implement. Mass vaccination campaigns of animal populations at risk are more likely to be an integral part of an eradication campaign for rabies than for most exotic diseases.

Perhaps the most critical aspect of a rabies control campaign in Australia would be to prevent the establishment of a wildlife rabies cycle. If the disease did become endemic in wild animals it is likely to be impossible to eradicate. To prevent this possibility it will be necessary to carry out population reduction campaigns for likely reservoir hosts, such as foxes, dingos and feral cats, in the infected area. More studies need to be carried out in Australia to determine how this should be best done. Another deficiency in our knowledge at present, which should be rectified as far as possible, concerns the likely role of native fauna species in the epidemiology of rabies and whether it would be necessary to institute any population reduction measures for any native animals in an infected area. Animal control authorities would obviously be extremely loath to take such action unless it was really vital to do so.

Newcastle Disease and Avian Influenza Disease.

The next diseases to be considered are two virus diseases of birds that have the potential to cause serious production losses in our poultry industries. These are Newcastle disease and avian influenza disease. They are conveniently grouped together as the eradication procedures that would be adopted against them are very similar.

Newcastle disease virus causes a disease affecting the respiratory, intestinal and central nervous systems of domestic poultry and many other avian species. It is highly contagious and the disease may spread rapidly from flock to flock. Mortalities may be very high, but virus strains of lower virulence also occur. Since 1966, an avirulent (i.e non disease producing) strain of ND virus has been recognised as occurring in Australia. This may complicate the diagnosis of superimposed virulent disease.

Newcastle disease has demonstrated a greater potential for rapid international spread than probably any other animal disease. There have been two virtually world-wide epidemics of Newcastle disease, the first one extending from 1926 to the mid 1930s and the second from about 1965 to the early 1970s. The latter epidemic culminated in outbreaks in southern California in 1971-2 in which 11.9 million birds either died or were destroyed and which cost \$56 million in Federal funds alone to eradicate. Australia was affected in the first world epidemic, but has been free of virulent Newcastle disease since 1932.

Movement of chickens and poultry products has been a major factor in the international spread of the disease. However the importance of international trade in aviary and fancy birds in

spreading the disease has become increasingly recognised. Many species of birds can harbour the virus in their gastro-intestinal tracts for long periods without necessarily showing overt signs of Newcastle disease.

There is a high risk of entry of Newcastle disease into Australia. The threat comes from two sources. Firstly, there is a high level of smuggling of birds and eggs into Australia. For example, in 1982 306 birds and 1,930 eggs were seized at Australian airports and seaports and these probably only represented a fraction of illegal entries. These included a high percentage of high risk species for Newcastle disease such as pigeons, pheasants and parrots. The second threat comes from our immediate north. Newcastle disease is endemic in Indonesia. Outbreaks have been reported in recent years in poultry flocks in Irian Jaya. There is a risk of further spread either to Papua-New Guinea or northern Australia via domestic poultry or wild birds.

Avian influenza disease, despite its name, is primarily an enteric infection of poultry which may cause very high mortalities. However, as with Newcastle disease, strains of avian influenza virus vary markedly in their virulence. At the last Seminar here in 1980, Dr. Brian Rushford described the one and only outbreak of fowl plague (now included in the term avian influenza disease) that has occurred in Australia. This outbreak, in a Melbourne suburb in 1976 involved only three flocks but presented several logistical problems in its control. However this outbreak pails into insignificance compared with outbreaks that occurred in eastern USA in 1983-4, in which 18.2 million birds either died or were destroyed as part of the eradication campaign.

It is a characteristic of avian influenza disease that outbreaks may suddenly occur in any part of the world without warning and that the immediate source of infection is often untraceable. Waterbirds are an important reservoir of avian influenza viruses but the link between infection in these birds and subsequent outbreaks of disease in domestic poultry is often very indirect. These factors make it extremely difficult for quarantine authorities to provide adequate protection against the entry of this disease.

Contingency plans for these diseases are based on depopulation of infected flocks and disinfection of premises, quarantine procedures and movement controls for birds and eggs. Vaccination may also be adopted for Newcastle disease depending on circumstances.

The poultry industry in Australia is heavily concentrated within a few small regions. The industry is also highly integrated, and as a result of this there are many movements of chickens between different poultry centres across the country. For these reasons there is the potential for very rapid spread of either virulent Newcastle disease or avian influenza disease should they enter Australia. Eradication of a large outbreak of one of these diseases would be an extremely major undertaking.

Screw Worm Fly.

The final disease for consideration is screw worm fly (SWF) infestation. This is our most direct exotic disease threat, at least in a geographical sense, in that it is the closest to our shores. There are two species of SWF that infest livestock. Of these, the old world SWF, *Chrysomya bezziana*, occurs throughout South-east Asia and Papua-New Guinea (figure 4).

The fly is an obligate parasite of mammals. The adult female fly lays its eggs at fresh wound sites. The resulting deep-seated larval strikes may cause debility, sterility and even death of affected animals. A study by the Bureau of Animal Health in 1979 indicated that the unchecked spread of SWF in Australia could cause annual losses of \$65-155 million to our cattle and sheep industries.

The highest risk area for entry of SWF is Torres Strait and Cape York. There the fly could persist for a considerable time before its presence was recognised because of the remoteness of the region, the low veterinary presence and the poor control over livestock there. For this reason an early warning system for SWF, utilising specific SWF traps and some other measures, has been established in the region.

It has been argued that because the fly has never been known to spread from Papua-New Guinea to any of the Torres Strait islands, the risk of its entry to Australia is very small. However it is fallacious to argue that because something has never happened in the past it will not occur in the future, as risk factors change. There are now high populations of SWF in the PNG coastal swamplands adjacent to Torres strait, probably due to increase in feral Rusa deer populations there. There is also a far greater mobility of people throughout Torres Strait than in earlier times and therefore more potential for movement of infested animals in the area.

The experience of the USDA with the eradication of the related new world SWF, *Cochliomyia hominivorax*, and research findings by CSIRO in Papua-New Guinea, have led us to believe that the only feasible method for controlling and eradicating SWF in Australia would be by the sterile insect release method. In this method an infested area is saturated with sterile male flies for an extended period and the population of wild flies declines to zero over several generations.

SWF is one exotic disease for which written contingency plans alone are inadequate. Working up the capacity to mount a sterile insect release method campaign from scratch would take at least 18 months, during which time the fly may become widespread in Australia. Therefore some physical resources need to be provided in advance. The Bureau in conjunction with CSIRO is maintaining a facility in Port Moresby containing laboratory colonies of flies and equipment with a capacity to produce large numbers of sterile flies so that an eradication campaign could be mounted very quickly if required.

Conclusion.

Many major exotic animal diseases, including those that have

been discussed, have shown great potential for international spread. Australia must continue to enforce strict and thorough quarantine procedures to prevent the entry of exotic diseases. However even the most sophisticated quarantine barriers may be penetrated. Therefore we must be fully prepared so that we may be in a position to rapidly eradicate an introduced disease before it can cause much damage or can become firmly entrenched here.

Continued

Some major exotic animal diseases, including those that have

FIGURE 1 : WORLD DISTRIBUTION OF FOOT-AND-MOUTH DISEASE

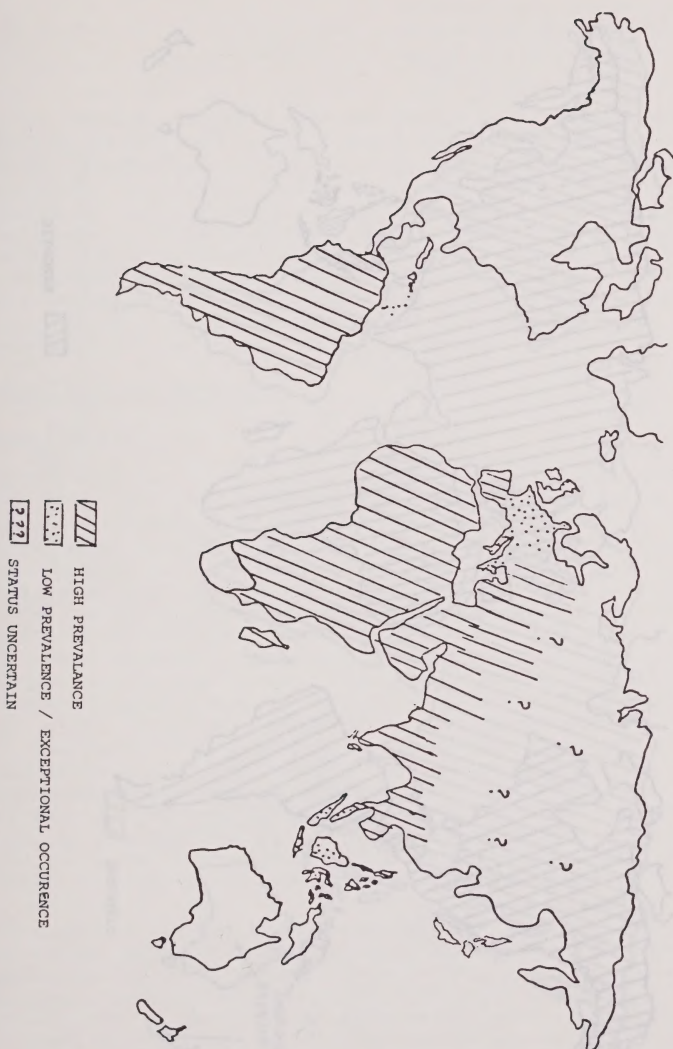


FIGURE 2 : WORLD DISTRIBUTION OF RABIES

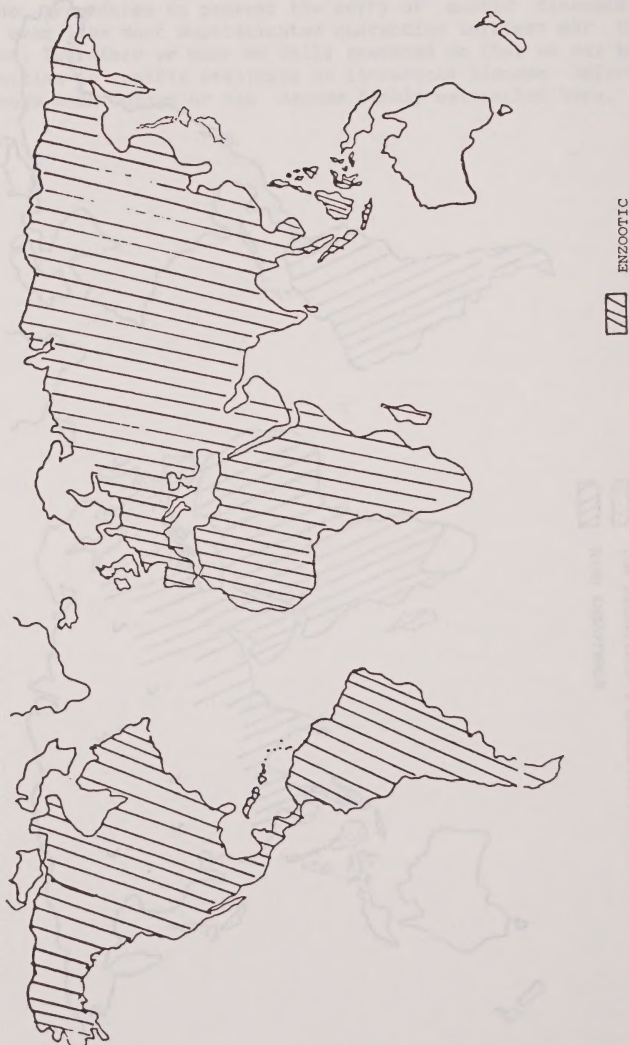


FIGURE 3 : WORLD DISTRIBUTION OF NEWCASTLE DISEASE



FIGURE 4 : WORLD DISTRIBUTION OF SCREW WORM FLY



Exotic Diseases - the Changing Scene

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In his keynote address to the 1980 Exotic Animal Disease Emergency Seminar, Dr Bill Gee outlined the history and the consequences of exotic diseases and the problems of controlling such diseases in Australia. His remarks are generally as valid today as they were five years ago. However we live in a rapidly changing world and significant political, social, legal and technological changes in recent years already influence exotic disease threats and eradication policies and will do so increasingly in the future. In this address I propose to outline the nature of these changes and their potential effect on disease emergency planning and to discuss some aspects of our current state of readiness.

CHANGING SOCIAL ATTITUDESAnimal Welfare

There is nothing new about the welfare lobbies and their impact on the social attitudes of the Community as a whole. British animal health authorities have expressed the view that had the 1966/67 FMD outbreak not been contained when it was, there is grave doubt that the slaughter-out programme could have been sustained not only because of the mounting cost but also because of the community concern at the slaughter of such large numbers of animals. There is little doubt that the welfare lobby in Australia has had an impact on social attitudes towards the rights of animals. Administrators in the country have already responded to the social pressures by developing model Codes of Practice aimed at setting standards for the welfare of animals. Those of us with responsibilities now and in the future for programmes which involve the destruction of animals even in small numbers will inevitably be subject to considerable pressures to justify any slaughter-out policy. We may be able to convince the public that diseased animals should be humanely destroyed but we will have great difficulty in justifying the wholesale destruction of healthy contact animals which is essential to the containment of most exotic diseases.

The important message is that animal health emergency planners can no longer assume that the community will tolerate or accept the destruction of large numbers of animals as a means of containment of disease. Planners should include contingency plans which examine alternatives to the preferred technically correct approach if this is based on slaughter of affected and contact animals. A second message is that administrators need to have their publicity packages

justifying slaughter-out in readiness. A proactive approach to the media in this area is even more essential than bland technical information about the particular exotic disease.

Concern for the Environment

We have been aware for many years of the environmental issues involved in the disposal of large numbers of carcasses. The major change is that environmental protection is now firmly entrenched within State statutes and local Government ordinances. This means that planners and those responsible at field headquarters are obliged to become familiar with environmental legislation and to establish all necessary contacts with administering authorities at State and local levels. Disposal is no longer simple and all options need to be considered in advance of the event.

Political Influences

Of real concern is the influence of Federal Finance officials with their insistence on a review of the Commonwealth-States Cost-sharing arrangements for the eradication and associated control of specific exotic diseases. The arrangements have been in place for 30 years. They have been refined and the list of diseases expanded. The present review of the basis of funding operating costs and compensation threatens the great degree of confidence established within the States and the livestock industries that these costs would be met nationally on a shared basis. There can be no argument with a review of the list of diseases included within the agreement. Disease prevalence and technology is sufficiently dynamic to warrant periodic review. However the Commonwealth review of financial arrangements is a potential threat to what Dr Gee described five years ago as 'excellent cooperation between disease control authorities in Australia'. Any radical change from the present Commonwealth commitment to the cost-sharing arrangement would threaten the national approach to exotic disease eradication supported so strongly by the keynote speaker five years ago.

I am not aware that this review was politically inspired. However it does illustrate the changed political climate generally in this country. The trend towards a shift in resources from the rural sector and the political demands for greater parliamentary accountability are not likely to exclude such vital issues as exotic disease contingency planning. Animal health administrators will be called upon to justify more completely potential expenditures to control exotic diseases. They can expect greater political questioning of the eradication procedures during an outbreak as politicians respond to community pressure groups of many kinds.

The Law and Social Change

The increasing dominance of legal processes over our lives extends to exotic disease. Professor Whalan of the ANU addressing the 1984 Anzus Congress pointed out that in many areas Australia does not have adequate legal machinery to support the excellent administrative arrangements in place to deal rapidly with an exotic disease episode. To quote Whalan "Unless adequate laws are in place, any action can, quite properly, be challenged by a person who is disadvantaged by the action or any proposed action. People, plants or animals cannot be subject to restraints or actions unless those restraints or actions rest on a solid legal basis." It behoves all senior Administrators to take heed of the Professor's warning and to acknowledge his plea for truly uniform laws in this area.

Professor Whalan also raised the Commonwealth's Constitutional power under Sections 12A and 13 of the Quarantine Act 1908 to take any measures necessary for the diagnosis, prevention and treatment of any quarantinable disease, provided the Governor-General is satisfied that these powers are necessary for preventing the spread of such disease. There is no doubt that such Commonwealth law is paramount but in my view any debate on this issue is academic. The Quarantine Act and particularly Sections 12A and 13(1) and (3) were drafted to deal with human quarantinable disease problems. The only diseases defined as being quarantinable until recent years were human diseases. Furthermore the Quarantine Act and Regulations do not provide the powers necessary to apply immediate quarantine and for the exercise of the stringent powers essential for containment and eradication by slaughter.

I am certain States' Treasurers would welcome the exercise by the Commonwealth of its full powers under the Quarantine Act in an animal health emergency in order to save the States' contributions. However we should concern ourselves less with debate on Commonwealth v State's powers and more with the most efficient means of eradicating any exotic disease incursion. The States' Chief Veterinary Officers, most of whom are also Chief Quarantine Officers, would surely invoke the most appropriate legislation to deal with the particular incident even if this meant a change from Commonwealth to State legislation or vice-versa.

Of greater potential significance is the gradual ascendancy of so-called administrative law over the parliamentary responsibility to ensure that executive government is responsible to the electorate through parliamentarians. Executive government has become too complex and pervasive for parliamentary scrutiny to cope and members are unlikely to pursue issues of little political significance. The Commonwealth, influenced by Sir Garfield Barwick as Attorney-General in the early 1960s, established the Kerr Committee to examine the issues involved. Other committees followed with the result the

Commonwealth has now established the Administrative Appeals Tribunal, the Ombudsman, the Administrative Decisions (Judicial Review) Act and the Freedom of Information Act. These administrative review systems have been adopted to a lesser extent by the States.

The development of administrative law in western democracies has arisen as a result of the political recognition of the rights of the individual, his right to personal privacy and the demands of modern society for greater accountability and independent review of governmental decision-making as it affects individuals and groups.

The administrative law review mechanisms provide aggrieved individuals with a range of means of seeking independent review of administrative decisions. These add to the long standing judicial review arising from challenge in the Courts. The new administrative law provides opportunities to challenge the merits of the administrative decision denied by judicial review which is limited to the questions whether the decision-maker has acted fairly, within his powers and according to law.

Administrators have been concerned for some time at the impact of legal injunctions on the course of an exotic disease emergency. The opportunities for aggrieved individuals to obtain a stay of execution have been increased. Under Commonwealth Law, a Judge of the Federal Court may grant a restraining order within minutes upon ex parte application and execution by telephone. I have been subject to such a Court order issued on application under the Administrative Decisions (Judicial Review) Act. I am not aware of similar legislation in the States' Statutes but my advice to my State colleagues is that they should be well aware of such statutory powers if they do exist. These developments in administrative law illustrate the necessity to heed Professor Whalan's warning to ensure that all essential administrative restraints or actions rest on a solid legal basis.

Social Awareness

The increasing availability of information on public issues to the average citizen through the media and access to libraries and data banks is leading increasingly to the desire and ability to express informed opinions and to question political and administrative decisions. One outcome is the move towards overt and often protracted consultative processes which increases the visibility of administrators and the level of accountability.

The impact for those with responsibilities for exotic disease emergencies is that it is no longer possible to remain anonymous and to shelter within the system. Administrators have to develop new approaches to accommodate the greater level of social awareness. The Commonwealth has moved to establish an Exotic Diseases Industry Consultative Committee and my own State has an Exotic Diseases Industry Liaison Committee.

To illustrate the extent of access to information now possible, the person alleged to have perpetrated the FMD extortion threat in January 1984 revealed an astonishing familiarity with technical data on FMD probably gained through access to rural newspapers, television and the library of the prison where he had been incarcerated for several years. The live FMD virus debate in the rural press during 1982/3 of course aided in his acquisition of technical data.

THE IMPACT OF TECHNOLOGY

Dr Gee speculated on the threat posed by the more important diseases and their impact on the Australian economy and society. Since 1980 the scene has changed with the application of new technology. Efficient Foot and Mouth vaccines have further reduced the prevalence of this disease in Europe and some South-east Asian countries resulting in a reduction in the threat of a Foot and Mouth outbreak in Australia. European countries with ethnic ties with this country report very few outbreaks each year so that the possibility of illegal entry of meat products containing FMD virus and of that product reaching susceptible animals is lessened. The successful eradication of FMD from Bali by vaccination and the rapid control achieved in Java following the 1983 breakdown are illustrative of the value of effective control programmes which are now possible in such countries. There is considerable hope that the FMD situation in other neighbouring South-east Asian countries will improve greatly in the second half of the present decade. Should this be achieved the threat to Australia will shift more towards the Middle East and Southern Asia.

Australian authorities have recognised the technological advances in vaccine production, including the promise of new technologies such as recombinant DNA and peptide synthesis by the provision of funds in 1984/5 to contribute to an FMD vaccine bank. This move does not negate in any way the existing policy to eradicate FMD by quarantine and slaughter. It does however recognise the realities of an FMD incursion into areas of this country where early detection and eradication may be impossible and where vaccination may be essential as a last resort. It would be quite irresponsible if animal health

authorities in this country denied this and failed to develop contingency plans for the use of FMD vaccine. Such plans are now under consideration and I would hope that the livestock industry organisations would accept the necessity for such contingency planning.

Another area of technology advance relevant to the threat of exotic disease is that associated with the import of genetic material required or at least perceived to be required by the breeders of Australia's livestock. Improvements in animal disease diagnostic tests and the application of the most advanced engineering technology within the high security Australian National Animal Health Laboratory (ANAHLL) have enabled our breeders to tap a wide range of genetic sources previously closed because of animal health considerations.

During the interval since 1980, advances in genome technology, particularly that related to embryo transfer, have opened new horizons for the safe import of genetic material. There is accumulating evidence that the embryo may be impervious to most of the micro-organisms causing diseases exotic and endemic to this country. More research is necessary to convince quarantine administrators of the safety of the frozen embryo imported direct from high disease risk countries.

Coupled with disease testing of donors and of recipients held in secure isolation, the means are becoming available to tap new genetic material more safely and economically. This technology is the basis of the present protocol for the import of sheep and goats from north America and of the draft protocol for the import of fat-tailed sheep from the Middle East.

It would be unfortunate if you were to be left with the impression that there were no disadvantages arising from this new technology. Frozen semen and embryos present problems for our quarantine services. They lend themselves readily to smuggling and substitution within an officially sanctioned import programme. There are real problems with identification of frozen genomes and with control over their trading both nationally and internationally. There is also the problem of rapid and widespread distribution of any disease agent introduced particularly with frozen semen. Deep freezing preserves micro-organisms as efficiently as it does semen and embryos.

READINESS FOR ANIMAL HEALTH EMERGENCIES

There can be no doubt that Australian animal health authorities have advanced their planning and their readiness to cope with an animal health emergency during the last five years. The first CDC Exotic Animal Disease Emergency Seminar was itself a positive contribution towards the wider recognition of impact of an exotic disease emergency and the need to coordinate all the State and Federal agencies involved. The Australian Bureau of Animal Health took the lead in the development of COMPLAN and the States have followed with the publication or at least the development of complementary State Plans setting out the responsibilities of the agencies involved.

In Queensland and hopefully in all States the relationship between the veterinary and the Counter Disaster authorities has improved immeasurably. My own Departmental veterinary staff have been involved in regional State Emergency Service exercises and SES personnel have for some time been involved in aspects of simulated training exercises conducted by the Department. It is essential that there be familiarity and understanding of the respective roles and responsibilities of the two organisations at the local and State levels and that this be reinforced on a continuing basis. It is too late during the actual emergency.

Acknowledgement is due to the Commonwealth decision in the 1984/5 Budget to fund several programmes related to exotic disease readiness. Prior to this only spasmodic opportunities arose for training of official veterinarians in the recognition and control of exotic diseases. Funding of this important training was always uncertain and was restricted to a limited number of opportunities at formal training in the USA and Canada and laboratory experience mostly at Pirbright in the United Kingdom. It was usually difficult to take advantage of the few opportunities for field experience in actual outbreaks in overseas countries because of the uncertainty of funding. The new Commonwealth initiatives not only improve the opportunities for officials but recognise the importance of training for veterinary practitioners in the recognition of exotic diseases and in the essential steps to be taken upon suspicion.

A major unknown is the role of Australian wildlife in the spread and control of several important exotic diseases. Planning is difficult because of the little factual information available on the susceptibility of feral and native species and therefore must be based on the assumption that they are susceptible and important in the epidemiology of these diseases. Our knowledge has not advanced in recent years but ANAHL should begin to answer some of these questions within the foreseeable future. Similarly we lack

definitive answers to feral animal and wildlife control technology but we are gradually accumulating experience in control techniques. Again this problem has been addressed by a new Commonwealth programme which aims to assist the States in gaining expertise in feral animal control as it relates to exotic disease eradication.

A major advance in readiness is the imminent ANAHL security assessment report and the availability of that advanced laboratory for diagnosis, research and diagnostic method development and training of veterinarians in the recognition of exotic disease. The laboratory is already equipped to provide a rapid positive Foot and Mouth Disease diagnosis and can assist State laboratories with a number of other diagnostic procedures. Hopefully after further industry consultation the way will be open to import agents essential for differential diagnosis of the vesicular group of diseases and for definitive diagnosis of several other important exotic diseases.

Foot and Mouth Disease is the subject of the exercise at this Course and is pre-eminent as a cause of economic chaos in this country. I do believe however that greater attention needs to be given to readiness to deal with incursions of Newcastle Disease, Screw worm fly and rabies.

Newcastle Disease in its most virulent form is present on our doorstep on the southern coast of Irian Jaya adjacent to Papua New Guinea. A significant quarantine effort is being made in the Torres Strait to prevent its entry or at least to detect it promptly should it enter. The risks are increased however by the massive water bird population in the region which migrates annually into Australia's north. Limited screening of these species has so far failed to detect evidence that they have been exposed to Newcastle Disease virus.

An even greater risk arises from the smuggling of significant numbers of aviary and game birds from high risk sources. We are told that some 48 new species and varieties have appeared in Australia over the last ten years. The decision of the Commonwealth to provide a safe legal portal of entry for such birds is of some comfort.

The poultry industry poses special problems because of its complexities, the integrated chicken meat production, the range and number of people servicing poultry farms. The enormous numbers of aviaries and fancy bird breeders with birds susceptible to the Newcastle Disease virus adds to the problem.

Heavy Screw worm fly infestations abound in large Rusa deer populations along the Papua New Guinea coast within a few kilometres of Queensland's most northern Torres Strait islands. The deer periodically swim back and forth to Saibai Island but constant monitoring of this and other islands has failed to detect Screw worm fly infestation. The greatest risk is associated with the illegal movement of infested animals and we have no doubt that our enhanced presence and intelligence network has reduced this risk. However the build up in deer populations and the increasing sophistication of means of travel in the region is a continuing cause for concern.

Training of staff in simulated exercises appears to concentrate on Foot and Mouth Disease and the clinically indistinguishable vesicular diseases. This can be justified on the basis of its host range, infectivity and potentially pervasive involvement of a wide range of associated industries. However those responsible for training should consider the importance of greater experience and familiarity with the very different procedures and agencies involved in an outbreak of rabies. The involvement of medical and local government authorities and of the urban Community presents a totally new scenario with which animal health authorities generally have had little exposure. Rabies is by no means a low risk disease to this country. Dog and cat owners take extreme measures on emotive and economic grounds to avoid legitimate entry of their pets. The spectacular increase in traffic to northern coastal ports by overseas and returning Australian yachts carrying ships pets is another source of the risk of rabies. Coastal Surveillance and enhanced quarantine programmes have reduced this risk but our northern coastline remains wide open to illegal imports, including animals from rabies affected countries.

CONCLUSION

It is clear that veterinary authorities have recognised since 1980 the vital importance of the non-veterinary aspects of exotic disease planning and readiness. More emphasis has been placed on the organisational structures so essential to management of such a large scale operation. In my State, the training exercises have moved away from the disease technology towards the training of key people in management roles and the exposure of as many others as possible to the managerial processes, including communication and legal systems and industry liaison and public relations. These are the procedures of most vital importance requiring refinement to the highest degree if we are to be ready to cope with any animal health emergency. This Course promises to be another step towards a higher degree of readiness and I commend the Natural Disasters Organisation and the College for their contribution.

THE RABIES PROBLEM

RABIES IN MAN

C R BOUGHTON. Associate Professor of Medicine, University of New South Wales
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Hospital, Sydney.
Chairman, Control of Communicable Diseases (Standing) Committee,
National Health & Medical Research Council.

Introduction.

Rabies is not a major cause of death in man on a global basis, but because of the nature of the illness in man, it engenders an understandable fear. In addition, the disease is, or should be, preventable.

Incidence of rabies in various countries.

Accurate figures are not available for most rabies endemic Third World countries. There are probably about 15,000 deaths each year in the Indian subcontinent. A survey on the incidence of rabies in man carried out in Katmandu between 1978 and 1980 revealed 10 cases during that time. In the Philippines in 1964, 383 cases of human rabies were reported; an incidence of 1.2 per 100 000 population. Since 1960 in U.S.A. no more than five cases per year have been reported (45 cases from 1960 to 1984 inclusive). In nine of these cases no exposure to a known rabid animal was identified.

Geographical distribution.

Rabies endemic and rabies free countries are reported in the W.H.O. "World Survey of Rabies" issued every few years.

Pathology and pathogenesis of rabies in man.

The most common portal of entry is abraded skin. It has been shown that virus can enter a host via intact mucous membranes. Carnivores have become infected by consuming an animal dead of rabies. Air borne transmission may have been responsible for several cases in man (in bat caves 2 cases; in laboratories from aerosols). Transmission of rabies by corneal transplant has also occurred.

From the portal of entry the virus travels in retrograde fashion to the central nervous system along peripheral nerves. After CNS invasion, rapid spread of the virus occurs via nerve pathways or cerebrospinal fluid. Within hours in the experimental animal, the virus becomes detectable throughout the CNS, and later in virtually all organs of the body. Viraemia appears unusual and of low titre.

In man, autopsy findings show diffuse encephalomyelitis particularly in the brain stem and cervical cord with congestion, loss of cells and perivascular cuffing. Interstitial myocarditis with isolation of the rabies virus from the myocardium has been reported.

Clinical aspects.

The incubation period in man varies from two weeks to two years, average one to three months.

Prodromal stage; lasting two to four days may include low grade fever, malaise, anorexia, nausea, headache with parasthesiae or pain at the site of the original wound. In some there is apprehension, hyperexcitability, pain and tightness in the chest. Aerophobia (spasms of the pharyngeal muscles elicited by fanning of the face) is a useful confirmatory clinical sign. The phenomenon of hydrophobia seems to be peculiar to man.

The subsequent picture may be one of hyperactivity of the central and sympathetic nervous systems, the latter causing increased sweating, salivation or lacrimation, or one of ascending myelitis with paralysis and ataxia, followed by encephalitis and coma. In this 'dumb' form, the diagnosis of rabies may be missed. In the 'furious' form, marked CNS hyperexcitability is manifest psychologically by extreme apprehension, terror, terrifying dreams and hallucinations and maniacal behaviour. Generalised muscular convulsions occur, and may be precipitated by swallowing or the sight of water. Asphyxia may occur during such convulsions. Paralytic signs also may develop in some cases.

The duration of illness is usually short (two to six days) and death is usually as a result of respiratory or cardiac failure. Consciousness is retained throughout the illness.

Treatment.

The few recorded cases of survival in rabies have been managed in sophisticated intensive care units with full cardio/respiratory support. In man the case fatality rate is otherwise 100%.

Prevention.

1. Pre-exposure prophylaxis.

The development of the human diploid cell vaccine has provided us with an effective agent for active immunization. Current recommendations are that pre-exposure immunization be offered to persons in high risk groups eg veterinarians, animals handlers in rabies endemic areas, and appropriate laboratory workers. Three injections of 1.0ml HDCV IM on days 0, 7 and 28 has resulted in satisfactory antibody levels, as measured by the rapid fluorescent/focus inhibition test (RFFIT). Intradermal administration of 0.1ml on days 0, 7 and 28 resulted in development of antibodies in all those tested in U.S.A., but with lower titres and shorter duration than by the IM route. ID administration in certain other countries however has not produced consistent antibody responses, and a death from rabies occurred in a Peace Corps worker so vaccinated. If the ID route is used, then the antibody response should be assayed after vaccination.

Pre-exposure immunization does not eliminate the need for prompt post-exposure prophylaxis following an exposure; it does reduce the post-exposure regime.

2. Post-exposure immunization.

Immediate local treatment of wounds is essential with thorough washing with soap and water or with a quaternary ammonium compound.

Current W.H.O. recommendations include injection of rabies immune globulin as soon as possible, some of which should be injected around

the site of the bite, plus active immunization with HDC vaccine, five injections at days 0, 3, 7, 14 and 28. If RIG and HDC are not available locally, advice should be sought by the traveller at an Australian, British or U.S. consulate.

HDC vaccine is associated with local reaction in about 25% of recipients, and systemic (headache, nausea, abdominal pain, muscle aches, dizziness) in about another 20%. There are recent reports of hypersensitivity-like reactions (urticaria, anaphylaxis) during primary immunization or on booster injection (type III immune complex type reaction). Second yearly booster injections should only be given where strongly indicated.

Cheaper vaccines need to be developed, using say, continuous cell lines such as Vero, purified chick embryo, bovine foetal and other cell lines.

Plan for the Eradication of Rabies (N.H. & M.R.C.).

The Control of Communicable Diseases (Standing) Committee of the National Health and Medical Research Council recently appointed a Working Party to review the existing Plan for the Eradication of Rabies (appendix XXI, N.H. & M.R.C. 87th Session, June 1979). Council at its 24-25 October 1984 meeting, adopted the revised document, but noted that the following action was required to support the eradication plan:

- i) A plan to stockpile rabies vaccine for animal use be evolved by the appropriate authorities together with a mechanism to ensure an ongoing supply of vaccine. It is estimated that 4,000-5,000 doses would be required.
- ii) the Vertebrate Pests Consultative Group produce a plan for the control of feral animals.
- iii) a recommendation be made to ANAHL to study the susceptibility of native animals to rabies.

- iv) the State and Territory health authorities to consider which persons should receive pre-exposure rabies vaccination.

It may be that other matters may need consideration at this present meeting.

Ch. H. H. H. H.
26/2/85

PROBLEMS OF CONTROL OF RABIES IN AUSTRALIA

C R BOUGHTON, Chairman,
Control of Communicable Diseases (Standing) Committee
of the National Health and Medical Research Council.

Introduction : Nature of the disease in animals and man
- pathogenesis, symptomatology. Globally,
estimates in man - 15,000 deaths per year
in India - 50,000 deaths per year - worldwide

1. How could rabies enter Australia?

1.1 most likely illegal entry of a dog, cat, or other animal; smuggling; small boats, yachts.

? fructivorous bats ? rats - but why has the disease not been brought in by this means before?

1.2 legal importation -

(a) unusually long incubation period

(b) silent case

1.3 human case infected overseas

(a) classical clinical picture

(b) encephalitis - paralysis picture

Infected human - a dead end epidemiologically.

2. Closest enzootic area : Indonesia (currently probably excluding islands east of Java (NB small boat inter island traffic))

Concern lest rabies should enter W. Irian, thence to PNG

3. Presence in Australia could be suspected

3.1 in an animal, because of uncharacteristic behaviour, or some central nervous system illness

3.1.1 feral animals eg foxes, dingoes, feral cats

3.1.2 domestic animals

- in domestic setting

- in quarantine

OR detected unexpectedly on histological examination of specimens submitted to CSL

3.2 in human ? acquired overseas

? not acquired overseas - alarm

4. Control and eradication - depends on whether rabies appears in
 = quarantine station
 = urban
 = rural/sylvatic environments

4.1 In quarantine station - a controlled environment; procedures straightforward, including

- = recall of all animals released during preceding 14 days
- = destruction of all contact animals
- = quarantine restrictions for 9 months after the last case.

4.2 Outside quarantine station

Principles

- = control all movement of owned animals
- = compulsory vaccination of all cats and dogs
- = impound and destroy all strays
- = control feral and native animals as appropriate

4.2.1 In urban areas

Problems are those of :

- = identifying responsible animal(s)
- = identifying and designating infected area
- = establishing Regional Emergency Centre with staff and facilities
- = establishing holding areas for impounded animals
- = tracing and destroying contact animals
- = enforcing standstill orders
- = vaccinating all owned dogs and cats

- = dealing with feral animals
- = establishing a surveillance area around the infected area.

4.2.2. In rural areas

The problems are those of 4.2.1 plus

- = a larger potentially infected area, because of range of movement of likely hosts (say up to 20 km)
- = larger surveillance area (say up to 80 km)
- = determining numbers and species of feral and native animals in above areas, and how to control these.

There may be a critical population density of carnivorous species per unit area before rabies can become enzootic.

? is it possible to reduce feral/native animal numbers below this, for sufficiently long for the virus to die out.

? do we know the susceptibility of our native fauna to rabies.

? what would their role be in enzootic rabies

? can they be vaccinated against rabies

? could we use live attenuated vaccines in baits with safety.

? could and should AWAHL answer these last four questions

Finally, how many doses of rabies vaccine for animal use should be stockpiled for emergency use in this country?

ANIMAL HEALTH EMERGENCY INFORMATION MANAGEMENT

INTRODUCTION

Exotic animal disease eradication plans and strategies have been co-ordinated on a national basis in Australia for many years. Until the 1980 Mt Macedon exotic disease seminar, however, information management systems for dealing with exotic animal disease outbreaks had, in the main, evolved separately in each Australian State and Territory. Varying levels of input of development time, training and exercising had occurred in each State. This and the very nature of the independent activities resulted in considerable differences between States in their proposed methods of collection and handling of essential information for eradication management.

There is a clear need for a more uniform system of information management. Rapid exchange of information within and between States will be necessary in an emergency. Transfer of staff from State to State to assist with emergency operations will probably be necessary. The use of an information system common to all Australian States would therefore be an obvious advantage.

In 1981 the Bureau of Animal Health, with the agreement and assistance of all Australian States and Territories, began a project to develop an animal health emergency information system. This system, which later became known by the acronym ANEMIS, has now been incorporated in the operating procedures for exotic animal disease control in most Australian States.

DEVELOPMENT of ANEMIS

ANEMIS, to be of value, had to be efficient and effective in handling the complex information needs of a major emergency. It also had to be acceptable to all potential users. Australia is a very large country with diverse systems of agriculture, environments and disease control problems. Tailoring of the system to individual States requirements might be necessary whilst retaining close similarity and, above all else, compatibility between States. There was a need to ensure meticulous data recording and processing in a field where the consequences of error could be so costly. The system would also have to lend itself to the application of automated data processing (ADP).

The first task in the project was to examine the organisations which each Australian animal health authority would use to deal with an emergency and to identify the information needs of each section within those organisations. The vesicular diseases were used as a model because they are especially demanding in the response required.

Detailed discussion with each State revealed that common ground existed in many areas of exotic animal disease control. Each

proposed to establish a regional emergency centre (REC) in the vicinity of the disease outbreak to deal with field operations. Each would establish an emergency disease operations centre (EDOC) at the State headquarters to handle State-wide, inter-State and State/Commonwealth matters.

The range of disease control activities and hence the range of operational sub-divisions within disease control centres was very similar in each State. The grouping of activities into major sections within control centres was also broadly similar. Differences were accounted for in part by the extent to which support organisations had been incorporated into the overall structure. At this time the need for extensive support for the eradication effort from bodies other than Departmental animal health authorities had been recognised but plans to place their assistance on a formal footing were still being developed.

Many Departmental administrative procedures, (eg. financial and accounting, provision of equipment and supplies, and manpower management) already established and peculiar to each State were not considered amenable to modification simply for an emergency operation. Each State preferred to expand those existing arrangements as necessary in an emergency. Similarly, other organisations providing assistance in an emergency had their own systems of control and management which were best not disrupted.

Having identified the functional areas of emergency management common to all States it was not surprising to find that each of these areas had closely similar information needs. Using detailed information collected during discussions with the States information 'packages' were assembled. Each package was designed to service the needs of a specific function. These packages covered the entire range of activities, from those of the Chief Veterinary Officer in each State right through to each of the separate field activities conducted from an REC.

The next stage was to construct a paper information system embodying the information packages earlier identified.

Three tiers of information were required:

1. Summary information for Chief Veterinary Officers;
2. Resource and man management information for REC control;
3. Detailed data for field operations and for epidemiological studies (both current and retrospective);

Requirements were met by the arrangement of information into a 'pyramid' with detailed information being progressively filtered out as it was passed up through each successive level. Then beginning at the highest level it was essential to ensure that each item of information could be provided from data available in the level immediately below. This necessitated modification of

some of the original information packages.

A series of forms were then produced on which the information packages could be recorded. Field activities, eg. stock inspection, valuation, slaughter, disposal etc. would each be serviced by a separate report form. Each type of activity would be managed on a separate log sheet from which a daily summary is prepared. Daily summaries from each section are aggregated to produce a daily summary of REC activity.

Explanatory notes describing the use of individual forms were prepared. Duty statements were also prepared describing the aggregate use of forms within and between each REC section.

All elements of the system were now in place and ready for testing by State animal health authorities. The first field test exercises using the ANEMIS system were held in Victoria, Queensland and Western Australia in 1982. Those exercises served three main purposes. They helped to train personnel in exotic animal disease control procedures, to identify individual officers most suited to undertake key roles in a real emergency, and to examine the performance of each part of the ANEMIS system under operational conditions.

For subsequent exercises ADP was progressively introduced. The component in greatest need of computer assistance is that of livestock inspection or surveillance because large numbers of properties are likely to be involved throughout the period of disease risk. The daily preparation of field report forms for each property visited, log sheets and work schedules to manage these inspections is a repetitive, time-consuming task well suited to automation. This has now been done and tested in State exercises.

Refinements and extensions to present programs will no doubt enhance the usefulness of computer assistance. Indeed one extension already underway is the generation by ADP, of summary reports of daily REC activity.

USE OF ANEMIS IN ERADICATION ACTIVITIES

ANEMIS was developed to:

- ensure the collection of all relevant data;
- assist rapid collation and evaluation of information;
- expedite decision-making and follow-up action;
- allow best possible use of available staff resources;
- provide an overview of the eradication campaign.

The system cannot, of itself, manage disease eradication. It is simply a tool which can be used to achieve eradication, and, as with any other tool, the operator must be trained to use it if its full potential is to be exploited.

There are several crucial elements to the successful operation of ANEMIS. The first of these is comprehensive, accurate recording of field data. Without this, all subsequent information and action may be invalid. The system relies on the collection of field data by response to a series of questions. As could be expected, problems of interpretation of these questions have been encountered by field officers, the group responsible for data collection. Re-wording of questions has not solved the interpretation problem within this group which contains a diversity of experience and aptitude in exotic disease control. The problem was partly solved by the issue of 'job cards' and a briefing to each officer on arrival at the control centre. Final solution rests in having a de-briefing officer, skilled in exotic disease control, scrutinise each in-coming field report in the presence of the reporting officer. Any misinterpretation, error or omission can be immediately corrected before the information enters the system and is acted upon.

Standardised presentation of information on report forms speeds 'dissection' and reduces the opportunity for duplication or omission of vital follow-up action. Field reports, particularly those reporting the discovery of disease, contain many items of information for evaluation and follow-up action. Some items concern more than one section within the REC.

Because eradication is a complex process and because the responsibilities of sections within the control centre are intimately related, close consultation between REC sections on all major developments is vital. For example, on receipt of a field report of a new disease outbreak, representative staff from all REC sections should meet, examine the report and decide on the necessary follow-up action. It is common to find that the immediate exploration of every possible avenue of disease origin or spread is beyond the manpower resources on hand. An important function of the liaison process is, therefore, to assign priorities to tasks emanating from the report. The highest risk contacts are thus assured of first attention.

The availability of specific technical expertise places constraints on the conduct of disease eradication in the field. The most likely limiting factor will be the availability of veterinarians and stock inspectors. They must therefore be employed in positions where their special skills can best be used. ANEMIS provides an opportunity to economise on the use of veterinary manpower. Stages of information handling requiring veterinary evaluation and decision are concentrated into a small part of the system. Once those decisions are made, their implementation can be most effectively executed by clerical support staff. The maxim, 'Horses for Courses' was never more apt.

The system of daily reporting, particularly once provided with ADP assistance, permits the generation of routine daily reports from each REC section with the minimum disruption to their basic duties. This means that the REC controller and his senior staff remain relatively free to maintain an overview of their respective areas of responsibility.

INFORMATION HANDLING EQUIPMENT

ANEMIS was originally developed as a totally paper system. This caused difficulties in the transmission of large amounts of information between centres and lead to a sense of remoteness between EDOC and REC. The gap is being greatly reduced by the use of ADP. Full details of every property and all eradication activities can be transmitted between computer terminals in minutes.

Recent developments in facsimile machine technology make this means of transmission versatile and more suited to the needs of exotic disease control than telex. Facsimile copies of signatures now enjoy recognition as legal documents and hence avoid the need for urgent physical transfer of documents.

FUTURE DEVELOPMENTS

Traditional field exercises held in recent years have not raised Australia's capacity to mount a field campaign to a level where we can afford to be complacent. At the field officer level there have been insufficient opportunities to participate in exercises. Exercises have generally been too short to achieve a desirable level of staff competence in the systems which will be used and relied on in an emergency. In an area where so little funding has been available, and yet one upon which Australia's success or failure in eradicating an exotic disease undeniably rests, where should we direct our efforts?

Control centre management must be regarded as one crucial element. The task force, no matter how large, unless effectively deployed, is unlikely to succeed. It is vital that potential REC section leaders be identified and given a high level of training in their respective duties. They will then effectively use their own staff, relate to other areas within the centre, and interact with support organisations. Once this has been achieved field exercises should not become so bogged down with getting fundamental operations to work. There will be a greater opportunity to address the more complex issues which would inevitably arise after the first recognition of disease in the country.

Determining the information needs, other than those of a purely routine nature, of top departmental echelons is particularly difficult. Test exercises have elicited little direct feedback from directorates to assist development in this direction. Requests for additional information are especially demanding on staff when they are already hard pressed by an emergency. Any

information needs which can be foreseen and hence catered for in the planning stage will be of great value to all involved. For this reason training and test exercising should, wherever possible directly involve as complete a spectrum of personnel as possible. In the event of an exotic disease outbreak we will all be participants in the eradication campaign. We must all be participants in the preparation phase.

The rate of development of computer technology is such that concerted and co-ordinated effort must now be applied to the use of ADP in the management of animal health emergencies. In this dynamic field a fragmented approach could easily result in incompatibilities between State systems for want of co-ordination.

There is much to do and little opportunity to resolve problems during an emergency. The planning phase for an emergency is of paramount importance. The will is there - what remains is the provision of funds to permit the work to proceed.

R W Hall.
(ABAH)

ANIMAL HEALTH EMERGENCIES ARISING FROM
CHEMICAL CONTAMINATION INCIDENTS

BY R S Belcher, Chief Chemist

DEPARTMENT OF AGRICULTURE, VICTORIA

THE TELODRIN EPISODE

In 1963, in south-western Victoria, the milk from 90 dairy farms was diverted from use for human consumption and was used for the manufacture of non-edible casein and soap. Calves were dying, dogs and cats were ill and there were reports of nervous symptoms in babies of nursing mothers in the district.

Chemical investigation of samples of milk and of specimens from the dead animals showed the presence of a previously unknown chemical in the samples. A follow-up investigation revealed that a new insecticide had been used in the district for control of underground grass caterpillar and it was shown that this was the chemical present in milk and specimens. It was present at a sufficiently high level to have been responsible for the deaths of animals and for the other adverse effects. The presence of the chemicals was also detected in the milk of nursing mothers who had consumed dairy milk from their family's farms.

By a very fortunate circumstance, the analytical procedures involved were only possible because the Department of Agriculture had taken delivery, 2 months previously, of a piece of equipment known as an electron capture gas chromatograph, specially constructed to their order on the basis of then very recent scientific developments. The instrument was the first in the Southern Hemisphere and about the sixth in the world.

The company responsible for the product was incredulous at the suggestion that the observed effects were derived from use of their product but, after having sent a specialist veterinary toxicologist out from Great Britain, who had examined the chemical results, visited some affected farms and returned to England, the company authorised purchase of all milk from farms which had used the product and set up a monitoring system by which samples of milk from all farms would be flown fortnightly to Great Britain for analysis until the milk was clear of chemical. Arrangements were made by the Victorian Department of Agriculture to monitor the milk also to ensure that any decision made to release the milk from the affected farms to the marketplace could be justified.

The chemical had previously been used on large scale trials in South East Victoria and other parts of the world but no adverse effects had been detected. It was discovered however in the course of this Victorian investigation that any residues ingested in feed by the cow were concentrated in colostrum and this concentration was a major contributor to calf deaths. It also appeared that particular seasonal conditions that year had been responsible for unexpected persistence of the chemical in the pasture. Some farmers may also, because of the pasture shortage, have grazed sprayed pastures too early and there is a suspicion that empty containers left around the paddocks may have been licked by cows in some cases, to give the animal a very high intake of the chemical.

The chemical used was known as isobenzan or by the trade name of "Telodrin". It is related to dieldrin and heptachlor. It was later banned from use in Victoria and is now no longer manufactured.

One point which appears to have been overlooked at the time was the fate of residues in the meat of the cattle and, as far as is known, no steps were taken to follow the meat through distribution system. It is believed that the number of cows sold for slaughter was probably very small and that by the time the milk was relatively free of the chemical, the level of residues in the fat of meat would also be low. This was unfortunately not verified and no analyses were carried out on male animals at the time, so it is probable that some chemical residues eventually reached the general public.

This example close to home illustrates, vividly, the possibilities and consequences of chemical residues in meat.

PBB's IN USA

You will recall that a similar situation, but much more extensive and severe, occurred in the United States in 1973 when the chemical fire retardant, polybrominated biphenyl (PBB), was mixed into stock feed in mistake for a feed additive. This resulted in severe contamination of animals, with deformities and stock deaths resulting, and of produce, land and people in two States of the USA.

In this case diagnosis of cause of the problem and recognition of the contaminant was very slow, and perhaps only a fortuitous circumstance in the laboratory, where an instrument was left on for a very long period, prevented an even longer delay in dealing with the situation. Symptoms in animals were not recognized, since poisoning with such a chemical had never been observed before. The chemical was of such persistence that there was no possibility of awaiting its excretion from the animals as in the Victorian case with Telodrin. As a result, large numbers of animals had to be destroyed, farms were quarantined and the legal repercussions are still being felt.

The Seveso Incident

Another case of massive contamination of agricultural land, including livestock, took place in Seveso in Italy on 10 July 1976 as a result of an industrial explosion. On 15 July the first animal deaths were reported and reports of children suffering skin rashes came in a day later. Not until two weeks later the explosion was the toxic agents TCDD Tetrachlorodibenzodioxin first identified. It was confirmed by the company three days later. The company had been carrying out normal manufacturing process for the product trichlorophenol, and as a result of a complex series of incidents and chemical reactions the kettle in which the reaction was taking place underwent extreme heating, blowing the dioxin into the environment through a blow-out valve. The consequence was the complete evacuation of people from the area around the factory and destruction of all livestock and companion animals.

Sources of Contamination

1. Animals may drink water or eat food contaminated by industrial wastes or spilled chemicals or by misuse of agricultural chemicals, such as overspraying of pasture.
2. Animals may be treated with contaminated veterinary drugs for some disease or treated by dipping or use of a pour-on for external parasites, with a contaminated product.
3. Animals may consume pasture or hay which has been contaminated with an agricultural chemical or industrial chemical used or contaminated at levels resulting in hazard to the animals or consumers of the product.
4. Animals may be fed prepared stock food or other food containing industrial or other contaminants.
5. Animals may consume soil from land contaminated at some stage with chemicals either from pollution or spillage.

Possible sources of chemicals range from in-factory contamination of produce through transport spillages to massive factory effluent such as at Seveso. Contamination of agricultural chemicals and drugs and misuse of these chemicals can also result in animals carrying quantities of chemicals hazardous to their own lives or to potential consumers of animal produce.

Detection of the Problem

In an endeavour to provide for fast action in reporting possible problems in contamination of animals and other agricultural produce with chemicals and to assist in speedy recognition of a problem, the Victorian Department of Agriculture has, in its Agricultural Disaster Manual, set up operational procedures in respect of episodes involving agricultural and veterinary chemicals. These procedures are intended to ensure that where certain triggers, which may indicate a possible episode, are activated, officers of the Department will communicate the matter with a senior officer who can evaluate the situation and determine whether there may be a possible chemical emergency.

Since officers of the Department are located in all rural areas and are in many cases a person who will be contacted very early by a farmer or other person in the case of an animal death or sickness, or of obvious hazard to animals, the network within the Department should be able to detect possible problems very early in a situation. Further, interdepartmental contacts between officers of the Country Fire Authority, the State Water Commission, and Health Commission of Victoria, enable early and effective communication with regard to possibilities of chemical contamination detected by those authorities.

In summary, the detection procedure is as given in the manual .

Details are available in the sheets attached.

Consequent Action on Chemical Emergencies

A detailed action plan has not yet been developed by the Department of Agriculture for the second stage of action in chemical emergencies in Victoria. Action Plans under the Victorian State Emergency Service exist to cover massive roadside spillages of chemicals and to cover massive factory fires and similar incidents. These have been triggered by the occurrence of incidents of this kind.

One problem with dealing with episodes of chemical contamination is that the effects and the consequences cover such a wide range of possibilities. A further problem is the difficulty of actually detecting whether the incident which has occurred actually constitutes a chemical emergency which requires putting an action plan into effect. However where it is considered that a chemical emergency probably exists, the following procedure is one which could be followed by the Chief Chemist on receiving advice either directly from an informant or via the Chief of Veterinary Field Services, and confirming the situation.

The State Emergency Service Red Phone System enables communication from the office of the Chief Chemist, State Chemistry Laboratory, to other organizations involved in the Disaster Scheme, as well as providing out-of-hours trunk line facilities for contact with the country centres. Since in the case discussed below, water contamination, the Rural Water Commission would probably be the combatting authority, they would be supported by the SCL and other authorities. The Commission would need to take steps to have farm water supplies and other uses diverted from contaminated water.

As an example, in the case of a reported massive contamination of a water supply such as by transport spill, or of an indication of large numbers of dead fish, or of effects on stock consuming the water, arrangements would be made possibly through the State Water Authority for immediate sampling of water. If the chemical was unknown, there might be required a considerable amount of investigation to determine the type of contaminant.

Other State Authorities will have been formed, the Health Commission of Victoria, Environment Protection Authority, the State Water Commission, at least, and the resources available to those organizations will be available for the purpose of identification and quantification of the problem, providing in particular microbiological resources and some resources for investigation of contaminants.

The Organic Chemistry Branch of the State Chemistry Laboratory has had considerable experience and has expertise in identifying and detecting agricultural chemicals but less experience in respect to other chemicals. However, the equipment available would be usually adequate for this task. Immediate action therefore would require recalling staff into the laboratory if the matter is out of hours, or within office hours, mobilizing the resources in the laboratory to the solution of the problem.

Arrangements are currently being made with other laboratories located in the City of Melbourne, including the Australian Government Analytical laboratory and the SEC laboratory, to have available their resources and staff to assist in a situation. This would enable additional equipment to be provided

and where around the clock monitoring of the situation was necessary, chemists of various laboratories could be utilised either working in their own laboratory or that of another authority.

The Department of Agriculture calls on the State Chemistry Laboratory in this case would be for monitoring stock both to diagnose chemical poisoning and if necessary to determine whether the stock was saleable at a later date.

Parallel to the chemical action, the Animal Health Services are responsible for ensuring the contaminated animals will not reach the food chain, and together with the chemist, in determining if and how the source of contamination can be neutralized. If necessary animals will need to be slaughtered and in cases where they are clearly showing toxic symptoms, this may occur immediately.

As another possible case, where contamination is suspected to occur to contaminated agricultural chemicals or feed, to contaminated pasture, the Chemist has the role of detecting, identifying and quantifying the degree of contamination. The case in point occurred two years ago when a quantity of a sheep pour-on was contaminated, once with a toxic organophosphorus chemical which caused the death of sheep, and once with an organochlorine chemical which could have resulted in contamination of the meat. In this case chemists in the State Chemist Laboratory, in co-operation with their counterparts in the other States, followed up and monitored the presence of the chemical in samples of the product.

Unfortunately there is no current legislation in Victoria which provides specifically for a quarantine of properties where stock are contaminated as there is in New South Wales and Western Australia, nor for the compulsory slaughter of such stock. Steps can be taken however, in conjunction with the Health Commission of Victoria, to have the stock condemned as food and destroyed under provisions of the Poisons legislation and Health legislation. This approach is fairly cumbersome but it has been exercised in the case of poultry contaminated with organochlorine chemicals due to the misuse of it in poultry houses. Milk and eggs can be quarantined or disposed of or rejected by the relevant marketing authorities in this State.

Once it has been determined that the source of contamination has been eliminated, and that stock were free from contamination, any restrictions can be lifted and normal activities continued.

Future Action

It is clear that there needs to be additional planning in this State to deal with chemical emergencies involving contamination of stock or agricultural chemicals and this needs to be backed up by legislation covering quarantine and destruction.

Steps will be taken during this year to produce the plan to cover the mobilisation of the chemical analytical facilities in Victoria to deal with such a problem and this will be integrated into existing plans in respect to animal health and environmental decontamination.

AGRICULTURAL DISASTER MANUAL

(ENVIRONMENTAL EMERGENCIES)

Second Edition, December 1984

This manual has been produced by, and with the authority of, the Department of Agriculture, Victoria.

David F Smith
Director-General of Agriculture

6 OPERATIONAL PROCEDURES - AGRICULTURAL AND VETERINARY CHEMICALS

6.1 INTRODUCTION

- 6.1.1 Knowledge of an incident involving agricultural chemicals and veterinary drugs must be communicated as quickly and as accurately as possible to the relevant officer of the Department who can determine what action should be taken. In some cases, further action is already defined in complementary instructions (eg D54, Aerial Spraying - Inspection of Alleged Spray Drift).

6.2 DETECTION OF CHEMICAL EMERGENCIES

- 6.2.1 A check list of the incidents which could activate this plan is:

- | | | |
|----|---|----------------------------|
| a. | death or adverse effect on: | people |
| b. | " " | stock |
| c. | " " | fish |
| d. | " " | native animals or
birds |
| e. | " " | bees: |
| f. | misuse of veterinary drugs: | |
| g. | misuse of agricultural chemicals; | |
| h. | detection of chemical residues in
food products: | eggs |
| i. | " " | milk |
| j. | " " | meat |
| k. | " " | vegetables and
fruit |

6.2.1 (contd)

- l. detection of chemical residues in food products grain;
- m. chemical contamination of water;
- n. chemical spillage;
- o. contamination by over-spray of drift on: animals
- p. " " crops or pasture;
- q. report of over-strength or contaminated product: agricultural chemical
- r. " " veterinary drug
- s. " " feed
- t. " " fertilizer

6.3 SOURCES OF INFORMATION

6.3.1 Reports of chemical emergencies will come to the Department from a range of informants:

- a. Public complaint
- b. The local and metropolitan print and electronic media;
- c. Police;
- d. Officers of the Health Commission of Victoria;
- e. Fisheries and Wildlife Officers;
- f. Environment Protection Authority officers;
- g. Municipal officers;
- h. Department of Primary Industry - via monitoring activities;
- i. Community organisations such as the RSPCA and the Victoria Farmers and Graziers Association;
- j. Instrumentalities such as the Victorian Egg Marketing Board, the Victorian Dairy Industry Authority, the Grain Elevators Board and the Australia Wheat Board;
- k. Private veterinary or medical practitioners.

- 6.3.2 Departmental officers may themselves detect chemical emergencies in many ways, including:
- a. routine inspections or visits by Stock Inspectors or Veterinary Officers or Extension Officers;
 - b. chemical monitoring or agricultural foodstuffs;
 - c. complaints under Aerial Spraying Control Act;
 - d. complaints and reports by distributors of chemicals and veterinary drugs;
 - e. analysis of inspection samples.

6.4 COMMUNICATION

- 6.4.1 A departmental officer who detects an actual or potential chemical emergency of the kind listed above should immediately telephone, deliver, or preferably TELEX a brief report in standard format to the appropriate officer (section 6.5). Telephone reports are to be followed through by written confirmation.

- 6.4.2 The operational officer (Chief of the Division of Veterinary Field Services, The Chief Chemist, or the Agricultural Aviation Liaison Officer, as appropriate), will determine further response based on one or more of the following:

- a. no action (the incident may already have been investigated);
- b. further investigation;
- c. report to the Directorate;
- d. act within his authority, including referral to other agencies.

- 6.4.3 These officers or the Director of Media Services may decide to report an incident to any available member of the Directorate.

The Directorate member on receiving the report will decide further action, including a decision whether to release information to the media, and whether the situation is sufficiently significant for the Minister to be informed.

During the course of any situation, the Director of Media Services will continue to interact with the Chief of the Division of Veterinary Field Services, the Chief Chemist, the Agricultural Aviation Liaison Officer, and/or the Directorate member to ensure that media needs are met and that the media releases are accurate and timely.

The Directorate member will keep the Minister informed on action and progress in the case of significant incidents.

6.5 THE CHEMICAL AND DRUG EMERGENCY REPORT

The emergency should be reported in accordance with Section 10, FORMAT B, and directed to the appropriate operational Officer as follows:

- a. death of, or adverse effects on domestic or agricultural livestock or other animals or birds, or misuse of veterinary drugs (items a. to f. in section 6.2.1). Operational Officer: Chief, Division of Veterinary Field Services.
- b. contamination by overspray of drift on crops, pastures or animals (items o. and p. in section 6.2.1). Operational Officer: Agricultural Aviation Liaison Officer.
- c. in all other cases (items g. to n. and o. to t in Section 6.2.1). Operational Officer: Chief Chemist.

These Officers will forward a copy of any emergency report to one another and also to the Director of Media Services to alert him of the situation.

6.6 INVOLVEMENT OF OTHER DEPARTMENTS

- 6.6.1 Chemical and drug emergencies which involve the Department of Agriculture often involve other Departments. Nearly always the Health Commission of Victoria has an interest; other Departments which may be involved include the Ministry for Conservation, Ministry of Planning and Environment, including the Environment Protection Authority, and the State Rivers and Water Supply Commission.

Certain other bodies such as the Victorian Egg Marketing Board, the Victorian Dairy Industry Authority and the Department of Primary Industry may need to be informed, and are indeed closely involved in some emergencies.

- 6.6.2 The appropriate method of communication between the Department of Agriculture and other Departments is for the Chief, Veterinary Field Services or the Chief Chemist to contact nominated officers in the other Departments or bodies with whom they can talk immediately when the emergency calls for such contact. Back-up officers exist in each Department.

Each of the Departments or bodies concerned has nominated officers associated with any emergency plan set up in that Department. The Chiefs concerned should ensure that this relationship is kept up to date, and the lines of communication are kept open.

6.7 NOMINATED OFFICERS

Nominated AgVic officers and deputies, and contact telephone numbers are shown in Section 9.3 (contact personnel, chemical emergencies).

9.3 CONTACT PERSONNEL, CHEMICAL EMERGENCIES

<u>Chief Chemist</u>	<u>Office</u>	<u>Home</u>
Mr R Belcher	03 651 1282	03 531 8765
Mr D Mathews	03 651 1721	03 850 4528
Agricultural Standards Officer (Deputy)		

Chief, Division of Veterinary Field Services

Dr L Carroll	03 651 7134	03 49 2334
Dr R Salisbury	03 651 7267	03 589 1473
Director, Veterinary Staff Programs (Deputy)		

Agricultural Aviation Liaison Officer

Mr J P Bearham	03 651 7171	03 29 5209
Mr I B Fraser (Deputy)	03 651 7171	03 580 1341

Director Media Services

Mr M Boland	03 651 7234	03 690 1906
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DISASTER REPORTS BY TELEX TO CENTRAL CO-ORDINATING COMMITTEEFORMAT B: (FOR CHEMICAL AND DRUG REPORTS)

Telex No. AA 34261 AGVIC (CVFS, or AALO or CHIEF CHEMIST)

Copy to: Telex No. AA 36708 SCLAB (Chief Chemist)

Copy to: Telex No. AA 151187 SDPSIC (Director, OCDG)

DISASTER REPORT - URGENT - "CHEMICAL"1. Date and time of report2. General nature of incident

describe the incident representing an actual or potential emergency, in terms of section 6.2.1, items (a) to (t);

3. Address/Locality

state specifically where the incident occurred and the general extent of its effects;

4. Date of Incident (if known)

state when the incident began;

5. Source of report

indicate your source of information, and reliability, which led you to make the report;

6. Summary of incident

State what you know now, scale is important - stock affected or area affected; however, time is also important. Be brief; if necessary report further action as the incident develops;

7. Action already taken

summarise steps taken by you or by other departmental officers;

8. Authorities already involved

indicate which authorities, eg Police, CFA, SES, chemical or drug manufacturer, news media, etc., are aware of the incident;

9. Author and unit

include telephone number where you can be contacted, including after hours if appropriate.

CHEMICAL OR DRUG EMERGENCY REPORT

1. DATE AND TIME OF REPORT:
2. GENERAL NATURE OF INCIDENT:
3. ADDRESS/LOCALITY: State specifically where the incident occurred and the general extent of its effects.
4. DATE OF INCIDENT (if known): State when the incident began.
5. SOURCE OF REPORT: Indicate your source of information, and reliability, which led you to make the report.
6. SUMMARY OF INCIDENT: State what you know now; scale is important - stock affected or area affected; however time is also important. Be brief; if necessary report further action as the incident develops.
7. ACTION ALREADY TAKEN: Summarise steps taken by you or other Departmental officers.
8. AUTHORITIES ALREADY INVOLVED: Indicate which authorities, eg Police, CFA, SES, chemical or drug manufacturer, news media, etc., are aware of the incident.
9. ORIGINATING OFFICER AND UNIT: Include telephone number where you can be contacted, including after hours if appropriate.

THE LEGAL IMPLICATIONS OF AN EXOTIC DISEASE INVASION INTO AUSTRALIA

by Professor Douglas J Whalan LL. M., Ph.D., F.A.I.M.,
M. Br.I. Env. Sci., Chairman of the Board of The Faculties and
Professor of Law in The Australian National University.

The Constitutional Dimension

When we Australian lawyers are in doubt in dealing with potentially Australia-wide problems, we tend to blame all difficulties on our Constitution. However, it is a scientific fact, understood even by a lawyer, that exotic diseases do not automatically stop at State boundaries. But, rather than complaining about our Founding Fathers, we must devise practical ways of dealing with exotic diseases problems. Although it is satisfying to note just how much has been done, there is still a number of legal powers that have not been used to their fullest extent. I also suggest that much that has been done by administrative means has been done in spite of the law or despite the absence of law. Nevertheless, despite the amount of amicable administrative co-operation that exists between the Commonwealth and the States, we must recognize that the law ultimately obtrudes.

Most constitutional power in the area of exotic disease prevention, control and compensation, lies with the States. However, in theory at least, there are many Commonwealth powers, in addition to those actually used, that could be used.

I look first at powers that are potentially available to the Commonwealth, then see how much Commonwealth legislation is currently in place that could be used to deal with exotic diseases problems, and then turn to look at State legislation.

Commonwealth Constitutional Powers

(a) Potential Power.

The range of possible Commonwealth powers is substantial. The following powers in Section 51 of our Australian Constitution could possibly be used by the Commonwealth to cover parts of the field: trade and commerce, defence, quarantine, insurance, corporations, pharmaceutical sickness benefits and medical services, immigration and emigration, internal affairs and the incidental power. In fact the range is so wide, that the only powers that I rule out with any confidence are the Commonwealth powers over lighthouses, lightships, beacons and buoys!

However, as in so many cases, the politics and reality of Federal-State relations probably require that many potential powers not be used.

(b) Quarantine Power.

One very powerful weapon that can be used in the battle against an exotic disease invasion, is the quarantine power in Section 51 (ix). The Commonwealth Quarantine Act 1908 contains very strong powers that can be used to help to control any human, animal or plant outbreak.

Where the Governor-General¹

".... is satisfied that an epidemic caused by a quarantinable disease or danger of such an epidemic exists in a part of the Commonwealth, the Governor-General may, by proclamation, declare the existence in that part of the Commonwealth of that epidemic or of the danger of that epidemic.

.... Upon the issue of a proclamation the Minister may, during the period the proclamation remains in force, give such directions and take such action as he thinks necessary to control and eradicate the epidemic, or to remove the danger of the epidemic, by quarantine measures or measures incidental to quarantine."

"Quarantinable disease" covers those diseases mentioned in the Act itself and any disease proclaimed by the Governor-General to be a quarantinable disease.² The present list is small-pox, plague, cholera, yellow fever, typhus fever, leprosy, rabies, marburg fever, lassa fever and ebola fever.

There is also a very wide power given to the Minister administering the Act to deal with an emergency situation. Where in the Minister's opinion³

"... an emergency has arisen which requires the taking of action not otherwise authorized by this Act, he may take such quarantine measures, or measures incidental to quarantine, as he thinks necessary or desirable for the diagnosis, prevention and treatment of any quarantinable disease."

This is a most unusually wide legal power, as it gives the Minister a power that is not even determined in any detail in the legislation. But there is an obverse side to that coin: because it is so wide, acts done under it would be looked at very carefully if they were challenged in the Court.

Although quarantine powers are generally exercised at points of entry into a country, power is also given to the Governor-General in the Quarantine Act to prevent the removal of animals, plants or goods from one part of the Commonwealth to any other part of the Commonwealth, and to declare as a quarantine area any part of the Commonwealth where there is, or there is suspected to be, any quarantinable disease or any disease or pest affecting animals or plants.⁴ These powers can only be exercised if the Governor-General is satisfied that their

exercise is necessary for preventing the spread of a quarantinable disease, or a disease or pest affecting animals or plants.⁵

These powers are so extensive that there could be some problems in working out their legal relationship with the State legislation that covers some of the same areas.

As the quarantine power is a Commonwealth power under the Constitution, Commonwealth legislation would be held by the Courts to be paramount. Indeed, in an emergency situation the Courts need not be approached as the Quarantine Act gives power to the Governor-General in such circumstances to over-ride State laws by proclamation.⁶ Although Commonwealth power in this area is paramount, in practice, of course, there is a great deal of co-operation between Federal and State authorities to try to ensure that harmful diseases do not gain entry into Australia.

The State Powers - "Animal, Vegetable or ... Human"

I now look at State legislation which could be effective and, in doing so, I play the old game of "animal, vegetable or ... human".

All six States, the ACT and the Northern Territory have relevant legislation. All eight jurisdictions have health or public health Acts,⁷ animal or stock diseases legislation⁸ and plant diseases provisions.⁹

Whether the legislation covers human outbreaks, outbreaks in animals or in plants we find there are somewhat similar patterns in the three areas. Almost all provide for notification of outbreaks of disease,¹⁰ most have quarantine provisions aimed at preventing the spread of disease,¹¹ and the diseases are usually specified in the legislation.¹²

In most cases the legislation provides for the addition of a further disease to the list by proclamation or regulation.¹³ This means that quick action can be taken without waiting for Parliamentary approval if there were to be an outbreak of an un-listed disease.

However, there are problems that arise because of the non-uniformity of the legislation. For instance, there are gaps in the quarantine or quarantine-like provisions and therefore there is no uniformity of legal approach that can be activated if a national emergency situation arises. Administratively, no doubt, a plan can be worked out, but it is not yet lawyer-proof.

There are also some difficulties in integrating the State and Federal legislation. As we have seen already, quarantine is a Federal responsibility and thus the strictly quarantine aspects of the State legislation could be over-ridden. However, there could be difficulty in deciding when State legislation ceases to be quarantine legislation and becomes merely public health legislation, or in deciding when it becomes merely animal diseases legislation or plant diseases legislation.

Compensation and Legal Liability

We then come to compensation provisions and problems of legal liability.

(a) Compensation for Loss

In all eight jurisdictions there are provisions for compensation for some losses. The provisions are not well developed in the case of human diseases or plant diseases, but the provisions relating to stock diseases are more extensive and much better integrated between jurisdictions. Even in the animal diseases area there are still omissions or doubts that could cause legal difficulties in some jurisdictions.

Where human disease is involved some jurisdictions give compensation, if property is destroyed to stop the spread of disease,¹⁴ but often there are provisions which permit the recovery of costs or expenses from people affected by disease.¹⁵

In the plant diseases legislation there are many provisions which allow recovery of costs or expenses from a person.¹⁶ There is a number of provisions that provide that there is to be no compensation for loss unless there is negligence or malice on the part of officials,¹⁷ and in just a few situations compensation will be paid for loss.¹⁸

The animal diseases area is the best organised in respect to compensation. There is a Commonwealth-State Cost-Sharing Arrangement which first was entered into in 1955 to share costs of eradication of foot and mouth disease, should an outbreak occur.¹⁹ It has subsequently been extended to cover all vesicular diseases, as well as rinderpest, swine fever, African swine fever, rabies, Newcastle disease, fowl plague and bluetongue. Under the Arrangement the Commonwealth pays half the cost of any programme and the States and Territories the other half. It is truly co-operative in that, if an outbreak occurs in one State, that State does not pay half the costs involved and the Commonwealth the other half, but all States contribute to the States' half in proportions that are agreed in the Arrangement.

In the animal area too, costs and expenses can sometimes be recovered. However, all jurisdictions give compensation for loss of stock and usually other property as well; compensation in most cases is now at market or current value unless there is contributory negligence on the stock or property owner's part or the owner is convicted of an offence in relation to an eradication programme; and some, but not all, jurisdictions cover a wider range of exotic diseases than is covered by the Arrangement.²⁰ It is my view that all jurisdictions should amend their legislation to cover the wide range of exotic diseases. Most jurisdictions expressly exclude compensation for loss of profit or use²¹ and, because the compensation provisions of other jurisdictions provide only for specific cases that will be compensated, the law is probably the same in all jurisdictions.

The move towards uniformity in animal diseases is to be welcomed and it is suggested that in all areas uniform legislation should be developed to ensure that there is uniform treatment of all innocent victims of an outbreak of an exotic disease.

(b) Legal Liability

There is another side to the legal liability coin. As we know from the illustration of efforts to overcome Patersons Curse, where an injunction has been granted to restrain the release of a biological control agent, there are legal inhibitions on the use of some weapons to overcome outbreaks of exotic diseases.

Legal liability could well flow from the use of an agent for destroying an exotic disease. For instance, it could be a spray²² or biological control means. Furthermore, just as an exotic disease will not recognize State boundaries, neither would a bug such as is available to attack Paterson's Curse. If it is decided that it is in the public interest that such a bug should be used, there is very little likelihood that the Commonwealth alone would have legislative power to cover the whole area. If policy decrees that anyone releasing or using the bug should be relieved of potential legal liability, then here, too, it is my view that uniform inter-locking State and Territory legislation would be appropriate. I realize that along that way often lie delay and difficulty, but it seems to be the only secure way to go.²³

Conclusion

Much has been done administratively to guard against outbreaks of exotic diseases and Commonwealth-State co-operation is substantial. However, ultimate action and responsibility must rest on legal controls and legal rights and remedies.

Both Commonwealth and State authorities would wish to act as swiftly as possible in the face of a particular outbreak of an exotic disease which threatened either the public health of our community or our economic base if the outbreak were in the animal or plant population. But quick action can, in the "worst case" situation (that is where someone makes a legal challenge) be taken only if laws are in place to back up the administrative machinery. Unless adequate laws are in place, any action can, quite properly, be challenged by a person who is disadvantaged by the action or any proposed action. People, plants or animals cannot be subject to restraints or actions unless those restraints or actions rest on a solid legal basis.

It is my contention that, in many areas, Australia does not have adequate legal means for very rapid acts of control; and in some areas provisions for compensation for loss are not adequate. If there were legal challenges then, even in an emergency situation, much of the amicable co-operation that occurs may not be legally sustainable.

Of course law is only the starting point, but I argue that there is a strong case, both in justice and for Australia-wide administrative efficiency, for uniform laws to be developed to help us in any fight against an exotic disease invasion.

Footnotes

1. Quarantine Act 1908 s. 2B.
2. Id s.5. Diseases in relation to animals and plants are also defined in s.5 and they, too, may be declared by Governor-General's proclamation.
3. Id s.12A.
4. Id s.13 (1) (g) and (h).
5. Id s.13 (3).
6. Id s.2A.
7. A.C.T. Public Health Ordinance 1928 and Public Health (Infectious and Notifiable Diseases) Regulations; N.S.W. Public Health Act 1902; N.T. Public Health Act; Qld Health Act 1937-1982; S.A. Health Act 1935; Tas. Public Health Act 1962 and Quarantine Act 1881; Vic. Health Act 1958; W.A. Health Act 1911-1982.
8. A.C.T. Stock Diseases Ordinance 1933; N.S.W. Stock Diseases Act 1923; N.T. Stock Diseases Act; Qld Stock Acts 1915-1979 and Exotic Diseases in Animals Act 1981 - 1982; S.A. Stock Diseases Act 1934; Tas. Stock Act 1932; Vic. Stock Diseases Act 1968; W.A. Stock Diseases (Regulations) Act 1969 - 1978 and Exotic Stock Diseases (Eradication Fund) Act 1969 - 1983.
9. A.C.T. Plant Diseases Ordinance 1934; N.S.W. Plant Diseases Act 1924; N.T. Plant Diseases Control Act; Qld Diseases in Plants Act 1929 - 1972 and Diseases in Timber Act 1975; S.A. Fruit and Plant Protection Act 1968; Tas. Plant Diseases Act 1930; Vic. Vegetation and Vine Diseases Act 1958; W.A. Plant Diseases Act 1914 - 1981.
10. In the following footnotes the sections cited without the name of an Act or Regulation refer to the relevant Act or Regulations cited in full in footnotes 7-9.
That is, when discussing human disease, animal disease or plant disease, the references are to the relevant public health, stock or plant legislation.

Human diseases: A.C.T. Regs 4, 4A, 4B and 15; N.S.W. s. 29 and 50D; N.T. (there seems to be no specific provision); Qld ss.30 and 51; S.A. ss.73, 127, 128 and 135; Tas. ss 38, 142 (1A) and Reg.3 of Public Health (Notifiable Diseases) Regulations 1967; Vic. ss. 137, 138, 141, 162A and 342; W.A. ss.152 and 276-289. Also Commonwealth Quarantine Act 1908 s.22.

Animal diseases: A.C.T. ss.7 and 8 and Commonwealth Livestock Diseases Act 1978 s.6; N.S.W. s.9; N.T. ss.35 and 36; Qld s.23 and Exotic Diseases in Animals Act 1981-1982 s.8; S.A. s.19 and Health Act 1935 s. 107; Tas. s.10; Vic. ss.11 and 12; W.A. s.10 (2) (c).

Plant diseases: N.S.W. s.10; N.T. s.12; Qld s.16 and Diseases in Timber Act 1975 s.10; S.A. s.8; Tas. s.9; Vic. ss. 5A and 43; W.A. s.10

11. Human Diseases: A.C.T. Regs 5, 7-10 and 17; N.S.W. ss. 30A and 32A and Public Health (Amendment) Act 1937 ss.4 and 6; N.T. (no specific provision); Qld ss. 33, 34A, 35-38, 50, 53 and 56; S.A. s.144; Tas. ss.16, 17, 20 and Quarantine Act 1881. Also Commonwealth Quarantine Act 1908 s.5.

Animal diseases: A.C.T. s.10 and Commonwealth Livestock Diseases Act 1978 s.6; N.S.W. ss. 3 (1) and 10-15; N.T. ss.12-26; Qld ss.3 and 13-14A; and Exotic Diseases in Animals Act 1981-1982 ss.9-19; S.A. ss.5 (1), 6-8b and 13; Tas. ss.9 and 12; Vic. ss.3, 4 and 28; W.A. s.10.

Plant diseases: A.C.T. s.6; N.S.W. ss.5, 6 and 8; N.T. ss.9-11; Qld ss.4 and 15 and Diseases in Timber Act 1975 s.4; S.A. ss.3 and 5-7; Tas. ss.4, 8 and 13; Vic. ss.3, 5, 5A, 25, 31A and 33; W.A. ss.5, 6, 12 and 15.

12. Human diseases: A.C.T. Reg.3; N.S.W. ss.28 and 50C; N.T. s.10; Qld ss.29 and 32; S.A. s.4 and Second and Third Schedules; Tas. ss.3 & 13 (declared by Governor); Vic. s.3; W.A. s.3.

Animal Diseases: A.C.T. ss.3 and 4 (declared by Minister); N.S.W. s.3(1); N.T. ss.5 and 6 and Exotic Diseases (Animals) Compensation Act s.3 and Schedule; Qld s.3 and Exotic Diseases in Animals Act 1981-1982; S.A. s.5(1), Health Act 1935 s.106 and Foot and Mouth Disease Eradication Fund Act 1958 ss.3 and 4 (declaration by Governor); Tas. s.3(1) (proclamation); Vic. ss.3 and 4 (declaration by Governor) 20 and 38; W.A. s.6 and Exotic Stock Diseases (Eradication Fund) Act 1969-1983 s.4

Plant diseases: A.C.T. s.5 (declared by Minister); N.S.W. ss.3 and 4 (proclamation by Governor); N.T. ss.6 and 12 (notice by minister); Qld ss.4 and 5 and Disease in Timber Act 1975 ss.3 and 4 (proclamation by Governor); S.A. ss.3 and 8 and 8a (proclamation by Governor); Tas. ss.2, 4 and 13 (proclamation by Governor or by regulation); Vic ss.3, 12A and 32 (proclamation by Governor); W.A. s.4 (by proclamation).

13. Human diseases: A.C.T. Reg.3; N.S.W. ss.28 and 50C and Public Health (Amendment) Act 1937 s.3; N.T. s.10; Qld s.29; S.A. ss.5 and 5A; Tas. ss.3 and 13; Vic. s.3; W.A. ss.3 and 248.

Animal disease: A.C.T. ss.3 and 4; N.S.W. s.4; N.T. ss.5 & 6; Qld s.3 and Exotic Diseases in Animals Act 1981-1982 s.5; S.A. ss.5(1) and 8a and Foot and Mouth Disease Eradication Fund Act 1958 ss.3 and 4; Tas. s.3 (1); Vic. ss.3, 4 and 38; W.A. ss.6 and 7 and Exotic Stock Diseases (Eradication Fund) Act 1969-1983 ss.4 and 5.

Plant diseases: A.C.T. s.5; N.S.W. ss.3 and 4; N.T. ss.6 and 12; Qld s.4 and 5 and Diseases in Timber Act 1975 ss.3 and 4; S.A. ss.3 and 8; Tas. ss.2, 4 and 13; Vic. ss.3 and 12A; W.A. s.4.

14. N.S.W. ss.36 and 50A; Qld ss.40, 161 and 162; Tas. s.24; Vic. s.134; W.A. s.259.
15. A.C.T. s.10; N.S.W. s.34; S.A. ss. 66-69 and 145; Tas. s.26.
16. A.C.T. s.13; N.S.W. ss.16 and 27; N.T. ss.20 and 24; Qld ss.10, 11 and 13; S.A. s.13; Vic. ss.11 and 29; W.A. ss.14, 18, 22, and 24.
17. A.C.T. s.13A; N.S.W. s.25; N.T. s.22; S.A. s.14; Tas. s.11; Vic. s.22 (but there are some provisions for compensation); W.A. s.32.
18. Qld s.21 (2) and Diseases in Timber Act 1975 s.11; S.A. Phylloxera Act 1936 ss.40-42; Vic. ss.22, 28 and 37-40.
19. The relevant Commonwealth legislation is now the Livestock Diseases Act 1978.
20. A.C.T. s.8 and Commonwealth Livestock Diseases Act 1978 ss.11-17; N.S.W. ss.17B-17HA; N.T. Exotic Diseases (Animals) Compensation Act; Qld ss.15, 15A and 25B and Exotic Diseases in Animals Act 1981-1982 ss.25-37;
S.A. ss.13, 26, 27 and 43a, Swine Compensation Act 1936, Cattle Compensation Act 1939 and Foot and Mouth Disease Eradication Fund Act 1958; Tas. ss.13, 14 and 19A and Public Health Act 1962 s.24; Vic. ss.42-47; W.A. s.14 and Exotic Stock Diseases (Eradication Fund) ACT 1969-1983 ss.9-14.
21. N.S.W. s.17F; N.T. s.11; Qld s.32; S.A. s.13; Vic.s.45; W.A. s.12.
22. Although it involved a spraying programme for the control of grasshoppers and not an exotic disease, a Council was held liable for the death of cattle where grass had been sprayed: Buffier v. Warrah Shire Council (1938) 56 W.N. (N.S.W) 9. This was an application of the ordinary principles of negligence and nuisance; what was unusual was that the Council was under a statutory duty to spray, but did it negligently.

23. Since this paper was delivered the Biological Control Bill 1984 has been introduced into the Federal Parliament. It follows the pattern outlined here. It will negate legal liability where an eradication organism is released after a complex inquiry and approval process has been followed. It will also apply only to the A.C.T., but it is intended to be a template for uniform legislation throughout Australia.

APPENDIX 6
TO ANNEX D

LABORATORY SUPPORT IN ANIMAL HEALTH EMERGENCIES

W.A. SNOWDON

AUSTRALIAN NATIONAL ANIMAL HEALTH LABORATORY

The provision of laboratory support when animal health emergencies occur is dependent on adequate planning beforehand. For this reason this paper is divided into two sections - pre-emergency planning in the laboratory and laboratory support at times of animal health emergencies.

A. PRE-EMERGENCY PLANNING IN THE LABORATORY

1. Training of Field Staff

There are a number of avenues for obtaining training. The laboratory has a role in the training of field staff in the early recognition and differential diagnosis of exotic diseases. This role would complement the other training programs such as involvement of Australian field staff in the control of overseas outbreaks of exotic diseases and local training schemes based on audio-visual programs where hands-on experience with exotic diseases is not possible. The aim of this training is to make field staff aware of what exotic diseases look like so that they can be in a position to suspect them when they occur.

2. Training Laboratory Staff

Staff at ANAHL, and other laboratories throughout Australia, need to be trained in the various procedures and techniques for disease diagnosis and differential diagnosis. State laboratories usually have a very important role in the continuing diagnosis of diseases during outbreaks.

3. Development of Diagnostic Tests

Potent and specific diagnostic reagents need to be prepared and held in the laboratory so that they are available when suspected outbreaks

occur. These reagents must be monitored regularly to ensure that their potency and specificity are maintained.

4. Provision of Diagnostic Reagents to State Laboratories

There are diseases where it will be possible to make available to State laboratories safe diagnostic reagents for use in outbreaks of suspected exotic diseases. These reagents would need to be tested for potency and their safety guaranteed before released to State laboratories. Furthermore it would be necessary for aliquots of these reagents to be returned to ANAHL for potency testing at regular intervals.

5. Serological Surveys

It would be advantageous if surveys could be carried out to determine if animals in Australia, that had not been exposed to known exotic diseases, reacted in serological tests to exotic disease agents. This would determine if there are infective agents in our animal populations that cross-react with exotic disease agents and which could cause difficulties when interpreting tests for exotic diseases. The outbreak of swine fever caused by a virus of low virulence in N.S.W. in 1962 was not typical of outbreaks of acute swine fever that had occurred in Australia previously. It was necessary to resort to serological testing to diagnose infected herds. During this testing it was discovered that mucosal disease infection of pigs produced serological responses in pigs that gave false positive reactions for swine fever. This posed problems in diagnosis which had to be resolved at the time and involved a considerable amount of work during a period when resources could have been better applied to diagnosis and control.

6. Requirement for Vaccines

During the pre-emergency planning those diseases for which vaccines may be needed should be identified. Potential sources of supply should be investigated and the procedures for potency and safety testing, and methods of manufacture need to be evaluated. If feasible protocols of manufacture should be approved in advance as should the procedures for potency and safety testing.

B. LABORATORY SUPPORT AT TIMES OF ANIMAL HEALTH EMERGENCIES

1. Initial Diagnosis

The initial diagnosis in a suspected exotic disease outbreak is most important. The results of an incorrect diagnosis may be equally as devastating as a correct one. The factors influencing the accuracy of an initial diagnosis are:-

- a) Detailed clinical examination of affected animals and the preliminary diagnosis based on these findings.
- b) Collection of appropriate specimens for the disease that is suspected.
- c) Stage of the disease when the specimens are collected.
- d) Methods of packaging and transport of specimens to the laboratory.
- e) Availability of potent and specific diagnostic reagents, including the availability of susceptible animals for inoculation and facilities for holding them.
- f) Expertise of laboratory personnel.

2. Continuing Diagnoses

Once the outbreak of an exotic disease is confirmed and control and/or eradication procedures are implemented it is necessary to provide the means of carrying out continuing diagnostic work to support these activities. In Australia these would not only involve ANAHL but State diagnostic laboratories. These tests would be used to diagnose additional outbreaks and to carry out epidemiological surveys to monitor the spread of a disease so as to define the limits of its spread. Such surveys are very important in diagnosing those diseases which may spread without producing detectable disease. It is necessary in carrying out these surveys to ensure that the specificity of the tests is known as cross-reactions produced by related organisms may provide a false picture of what is really happening in the field.

3. Vaccine Production and Testing

Vaccine needs to be tested to approved protocols. The testing for safety and potency which is likely to be a requirement on at least selected batches of vaccine could include vaccination of animals and subsequent challenge.

4. Confirmation of the Eradication

With those diseases where eradication has been the objective it will be necessary to confirm that both the disease and its causative agent have been eradicated. This could involve extensive serological testing and in some cases attempts to detect virus carriers in the animal population.

C. CONCLUSION

Detailed planning is required at the laboratory if it is to contribute effectively in any exotic disease outbreak. However, this must not be done in isolation but in close collaboration with the other arms of disease control.

MARKETING CONTINGENCY PLANS FOLLOWING OUTBREAK OF EXOTIC DISEASES

* L.D. Beeby

Although Australia has had technical contingency plans to deal with an outbreak of Foot and Mouth disease for some time, it does not have such a contingency plan in meat and livestock marketing.

In February 1984, Standing Committee on Agriculture was instructed by the Australian Agricultural Council to set up a committee to specifically develop marketing contingency plans in the event of an outbreak of Foot and Mouth disease.

The committee comprises representatives of the Australian Meat and Livestock Corporation (convenor), Bureau of Animal Health, Bureau of Agricultural Economics, Australian Wool Corporation, Australian Dairy Corporation, Qld Department of Primary Industries and the NSW and WA Departments of Agriculture.

This paper will consider the likely effects of an outbreak of Foot and Mouth disease on the markets for Australian red meat and some options to minimise their effects, both on export markets and within Australia. It is not possible to investigate the alternatives fully in this paper. Rather it is designed to help set the background for the work of the Committee.

Effects of an Outbreak on Australian Industry

When an outbreak of Foot and Mouth disease occurs, the speedy success of the control measures will depend on whether or not the disease symptoms are immediately reported. Delays in reporting will not only aid the spread of the disease, but will also confuse and delay the confirmation (2), due to the age of the lesions.

Assuming there is no government market intervention, the following week would see a steady disintegration of the Australian livestock and related industries. The official emergency services would take over, livestock slaughterings begin, samples taken, tests completed, confirmation given, media statements issued and public relation efforts made, with confusion, speculation and hysteria rampant in the press.

Markets would decline with uncertainty until confirmation of the disease was given, at which time the vast majority of our major trading customers in meat, livestock products and wool would place bans on the import of our product. Markets for livestock and wool would crash within days. Stunned livestock producers would be faced with the dilemma of holding and hoping, or quitting the industry.

*Lloyd D. Beeby, Manager, Livestock Services, Australian Meat and Livestock Corporation - March 1985.

Movement of stock would be restricted, depending on the zoning of the area. Saleyard activities would cease in some areas. Direct selling methods would be advised. The Commodity Futures markets for livestock and wool would crash. Producer confidence would be at an all time low. Lending authorities would be carefully reviewing their rural indebtedness and their future lending policies.

The severity of the marketing problem from this point on will relate to the severity of the outbreak. If the outbreak is immediately confined with no adjacent area spread, the marketing implications are less complicated and capable of correction following an undefinable period (approximately 12 to 18 months).

If several sporadic outbreaks occurred around the original outbreak, the ability to contain the disease is more difficult and more complicated. The time frame for overseas country bans could be expected to be longer and the subsequent marketing implications greater.

Finally, if the disease spreads out of control, and becomes endemic, we become part of an entirely new ball-game. The entire industry, and perhaps even the economy, would have to adjust to a whole new set of marketing rules. A completely new approach to product presentation would be required together with an aggressive, co-ordinated marketing plan for the sale of Australian meat and livestock on all those markets that are available.

1. Disease Contained Immediately

In this situation, it could be expected that most countries would lift the bans on Australian meat and livestock very quickly, perhaps after 12 to 18 months. We would have to demonstrate accurately and responsibly that the disease had been eradicated.

However, livestock prices would immediately fall. As some parts of Australia are largely reliant on the American market viz North Queensland areas, the situation could arise where the cost of marketing beef cattle could be greater than the return. Here, the affect would be much greater than in the better rainfall areas of Southern Australia, which supply a large proportion of their production to the local market. However, because of the general flood of beef and sheep meats on to the market, profitability would be generally low.

The level to which physical livestock movement occurred in the weeks following the outbreak would depend on a number of factors but particularly would relate to the area in Australia where the outbreak occurred. If restriction of stock movements occurred, mass panic selling would be extremely difficult. If the disease was well contained, media presentation and public relations' activities should endeavour to assure the farmer that he need not panic sell.

As restrictions are taken off the movement of livestock, it could be expected that a proportion of livestock producers would quit the industry and attempt to diversify. This would particularly be seen in the better class country of Southern Australia where more options to diversification exist. To the contrary in the North of Australia, it is suggested that producers who do not have alternatives to cattle production would tend to hold their cattle rather than sell under forced conditions.

Direct selling in its many forms would largely supercede saleyard selling, particularly in those areas adjacent to the outbreak zone. The degree to which this occurred would depend on the level of restriction placed on the movement of livestock.

Because of the short anticipated time span (12-18 months), the Meat Export Industry would still be able to see its way clear to return into the major markets the next year. However, a different attitude to Australian meat imports by the importing countries could be expected. It would be difficult to forecast whether Australia would maintain its share in these markets due to the length of time we had been absent and the loss of confidence involved. Perhaps the low price we could offer on returning to these markets could help in regaining our historical share.

Because the countries importing meat from Australia have no established protocol with Australia relating to Foot and Mouth disease, it is difficult to assess reactions. How sensitive, or how pragmatic, importer countries will be to our meat exports will remain unknown until an actual disease outbreak occurs.

If the Danish Foot and Mouth disease outbreak of 1982 can be regarded as a possible guide to events, then we could expect the USA to ban Australian meat imports for 12 months, with Japan and Sweden maintaining bans for 18 months. Most EEC countries would not be expected to ban imports from Australia.

The Tasmanian Vesicular disease outbreak of 1981 resulted in immediate bans from our major importers, and these remained until it was proven that Foot and Mouth disease was not involved. These bans took no notice of the isolation or regionalisation of the disease, and embraced all Australia.

The major markets of USA, Japan, Korea, Taiwan and Canada could be expected to place bans of at least 12 months. These countries represent 79% of Australia's red meat exports in 1984, with a value of \$1,083 million (3).

If the Public Relations side of the outbreak is handled effectively, it could be expected that Middle Eastern buyers would continue to purchase Australian livestock, albeit with certain conditions. For instance, it is felt that the live sheep trade would continue, perhaps with hiccups, and probably with extra vaccination requirements. The demand would remain for shipper wethers. Prices however would be expected to fall, due to the hiccups and in sympathy with the general fall in livestock prices. These countries would also be expected to maintain imports of chilled and frozen lamb, mutton and beef.

Wool sales would be drastically affected (4). Japan, France, Federal Republic of Germany, Taiwan, Korea and China, representing imports from Australia of approximately \$977 million (47.8% of the market in 1984) (5) would be likely to place indefinite bans on greasy wool and probably temporary bans on scoured and washed wool (ie 3-6 months). The US would probably place a ban on greasy wool but allow the importation from Australia of scoured and washed wool. These US imports were valued at \$118 million (5.7% of the market) (5). UK would probably take a similar stance.

The USSR would probably take a less severe stance, although some initial reaction could be expected. The important market of Italy, due to the local incidence of Foot and Mouth disease and its reliance on Australian wool imports, would probably maintain these imports.

The wool export industry, worth \$2,302 million in 1983-84 (6) would be in difficulties.

The mutton industry, worth \$84 million in 1984 (3), would be virtually without markets, in the face of oversupply of competitive, cheap meats. Aged ewes would be allowed to die in the paddock rather than incur the negative returns involved in marketing.

Lamb prices would also fall drastically, in sympathy with other red meat price drops and in the face of a huge oversupply of competitive meats. Although this is primarily a domestic supply market, exports of \$53 million occurred in 1984 (3).

It could be expected that there would be an initial weakening in domestic consumer demand for red meat due to the negative atmosphere that would surround such an outbreak. This would be likely to change in time, particularly as it is shown that the disease is contained and because of the extremely low price for the domestic product. Per capita consumption in Australia for red meat could be expected to increase in the long run.

2. Sporadic Outbreaks

The situation as described in (1.) above, would be similar except that effects would be more prolonged. Certainly, if the disease was not quickly contained and sporadic regional outbreaks occurred, importing country confidence would be reduced even more and their willingness to lift bans would be impaired. Some countries that may waver in banning Australian product in the situation of a fast containment of the disease, may well impose bans where the problem continues for a longer period.

This would inevitably result in a longer period of reconstruction of the industry, a greater number of bankruptcies and a greater loss of confidence in the industry by producers and processors.

3. The Disease Becomes Endemic

Should this occur, Australia would join the other major meat exporters of the world on equal terms. We would be banned from our major five importers, except for cooked product.

It is suggested that importing countries may well be forced to re-assess their position relating to meat imports and could well accept product from countries with Foot and Mouth disease under certain circumstances. If this happened Australia would enter the market competing directly with the Argentine, Brazil, other South American countries, South Africa, and the EEC. Its preferential position as being disease free would cease.

Under these circumstances, a mass exodus from the industry could be expected with the national beef herd decimated. The sheep industry would equally suffer. It could be assumed that aged cattle and sheep would not be marketed, but let die in the paddock.

The large numbers of animals coming on to the market could cause many abattoirs to re-open in order to process the material. Alternative product processing concepts would be investigated and introduced.

Despite marketing innovations, the price for livestock would be at a give-away level, bankruptcies would be common, and the livestock industry and probably the national economy would be severely affected.

Discussion

The market analysis, and especially the suggested effects of the loss of the various markets on the rural producer indicate that, unless a controlled, organised marketing contingency plan is brought into action, a major sociological and financial disaster will result.

The total value of livestock, wool, wooled skins, beef and veal, mutton, lamb, pig, goat, fancy and canned meat and dairy product EXPORTS was valued at \$4,305 million in 1984 and represented 42% of total exports of rural origin (6). This, however, is only part of the overall problem. The gross value of production from livestock slaughtering (\$3,818 million) and livestock products such as milk, wool and eggs (\$3,494 million) was \$7,312 million in 1984 (6).

This represents the product value that would be directly affected by the adverse effects of a Foot and Mouth disease outbreak.

The indirect effects are equally frightening.

For instance the total rural indebtedness at the end of 1984 was \$5,842 million (7), twice as big as six years earlier. The effect of a Foot and Mouth disease outbreak on the demand for money will be at unprecedented high levels. How will the lending institutions approach this problem?

Labour effects are likely to be far-reaching. For example, stock and station agencies employ about 8,500 staff (8). Meat exporters and brokers employ about 1,500 people (9). Abattoirs employed 42,500 persons in 1980 (10), although this is now lower. The wool industry employs approximately 30,000 shearing contractors, shearers, shed hands, classers etc (11). Rural chemical/Animal Health companies employ 2,500 staff (12); farmer organisations, 700 staff (11); feedmills, 4,700 staff (13). These few ancilliary organisations employ over 91,000 persons, many of whom would lose their jobs. A further 260,000 persons are employed on rural properties in Australia (7).

The value of this labour and the operating costs of these industries as well as their product throughput, would represent a further huge loss to Australian rural life. Many country towns survive on these industries. Without them the towns would die.

Add to this list employment/operating costs/throughput values in the following industries:

- Futures exchange
- Saleyard operators and workers
- Transport drivers/operators/drovers
- Veterinarians and their staff
- Hay/silage contractors/hay producers
- Rural consultants/property managers/investors
- Feedlots, intensive piggeries
- Skin and hide workers
- Livestock oriented equipment/machinery manufacturers/distributors
- Feed/produce merchants
- Extension officers/researchers/administrators in Departments of agriculture, Shire workers, PP Board workers, not to mention statutory authorities such as the Meat and Livestock, Wool and Dairy Corporations.

Employment within each of these areas would be affected by an industry collapse.

In the meat processing area, marginal abattoir enterprises would collapse. The remaining abattoirs would experience a low throughput initially but this would increase dramatically as the industry moved into a reduction phase. The abattoir industry would then move into an unnatural situation of high throughput, high staff levels and possibly high profitability. This would move into a secondary phase of reducing throughput, reducing staff requirement and eventually a need for reduced over-all abattoir capacity.

The whole situation of emergency financing would have to be re-considered.

Public Relations as it Affects Importer Attitudes

The severity of reaction from importing countries who could feasibly maintain meat and livestock imports from Australia and who could possibly increase imports because of lower prices, could likely depend on the type of press coverage that develops. An hysterical, sensational, over-reacting press could easily cause these countries to reconsider their import position. Speculation in the press of this type could therefore harm the trade and the national economy.

If we are to keep markets, press releases should give emphasis to how well we control the problem, depicting this in a positive rather than a negative way. We should start to claim eradication very swiftly, if this indeed seems the path. We should let the world know that eradication is occurring easily and that there are no problems. We should emit an aura of confidence.

Given that our public relations has been satisfactory, we should then send envoys to our old markets to reassure them of our position and in those instances where bans have been placed, seek to have them lifted as soon as evidence of eradication is indicated.

Additionally, there is need for a public relations plan indicating how the Australian consumer should be handled so that the negative side of the disease outbreak can be effectively counteracted. Domestic consumption is all-important if we are to effectively market ourselves out of this problem. Every attempt should be made to ensure that per capita consumption of our red meat does not fall.

Export Markets

It would appear that the five major markets for Australian meat mentioned earlier will impose immediate bans on Australian livestock and livestock products in the event of a Foot and Mouth disease outbreak. It is doubtful if these markets would consider re-opening their red meat importations until such time as Australia was given an international all-clear as being free from the disease. This could be at least 12 months.

Given that there is no national withholding of livestock, there would be about 460,000 tons of red meat (3) to be disposed of in the first 12 months, but with the prospect of selling it to only those markets that are willing to accept meat from Foot and Mouth disease affected countries. It may well be that producers anticipate that, due to the likely short term nature of the bans, they would be better off withholding their cattle until such time as the bans are lifted. Under this situation, considerably less than 460,000 tonnes of red meat could be expected on the export market.

Of our current customers, it would be hoped, but not necessarily assured, that most middle eastern markets would continue to purchase our meat, as would probably Malaysia, Singapore and possibly the Philippines. In 1984 these countries represented 12% of Australian red meat exports, 56% of which was sheepmeat (3).

The ability of these markets to absorb a great deal of the excess 460,000 tons must be questioned, especially bearing in mind the high per capita importation of meat in both slaughtered and live form in the middle east. Certainly strong promotional and selling programmes would be developed for these areas. Egypt is always interested in purchasing cheap meat and livestock, while the potential for Iran to re-enter the market in view of the cheapness of Australian meat must be considered. Marketing efforts would probably be directed to such markets.

The main remaining markets would be those willing to accept meat from Foot and Mouth countries, and which already probably trade with those countries. The USSR in particular could be a potential buyer of large quantities of our beef, providing the price was low enough. Similarly other eastern bloc countries could all re-enter the market at a price. Both the EEC and South America could even become markets for Australian red meat exports.

But this is one of the basic marketing problems we would be facing. In European markets we would be competing against traditional Foot and Mouth affected countries, particularly the Argentine, Brazil and Uruguay. In 1984, these three countries alone were forecast to export 1,180,000 tons or 24% of the world's forecast trade in beef (3).

To compete against Foot and Mouth disease affected exporting countries, Australian prices will have to be low. For instance, recent prices for frozen carcass beef from Argentina and the EEC to Egypt was \$US 1,600 per tonne (16).

These South American countries will not sit back and see Australia try to undersell them on accepted Foot and Mouth Markets. They will fight for, and compete in these markets. The competition will further drive down the international price for our exportable red meat product.

It is obvious that one strategy that must be pursued vigorously is the potential for Australia to convince the major five importing countries that, if the Foot and Mouth outbreak is confined to one area, then exports can safely occur from the non-affected area.

For instance, it may be that exports could continue from eastern Australia if an outbreak occurred in, and was confined to, south west Western Australia. Equally, exports from Western Australia could continue if the disease occurred in the east. The same would apply in a north/south situation.

Whilst the argument is excellent, and worth every effort to achieve, logic does not always enter into this type of situation. It is understood that regional confinement of Foot and Mouth disease exists in some South American countries. However none of the five major importing countries of Australian red meat (USA, Canada, Japan, Korea or Taiwan) have been willing to accept this argument; nor have they created a precedent by importing chilled or frozen meat from these South American countries.

In short we could not budget on being able to keep any of these five markets through a regional confinement argument.

Aggressive marketing from disease-free countries such as New Zealand, Denmark, Ireland and possibly the UK would be expected. Much of Australia's traditional export to the major five markets could be expected to be replaced from these sources. The ability of Australia to regain its traditional place in these markets after the Foot and Mouth disease has been officially eradicated, must be queried.

Those countries filling the gap during the ban period could be expected to retain some of their foothold. For Australia to expect an immediate return to full export of Australian red meat tonnage would be naive. The longer the ban period, the greater would be the difficulty in regaining lost markets.

As a corollary, it might be argued that countries like America, Canada etc may be forced to reverse their attitude to imports from Foot and Mouth disease affected countries. However, this is unlikely. Australia in 1984 provided in exports to the USA only approximately 2% of that country's annual consumption of beef (15) - hardly enough to force them to drastic action. If they did accept frozen rather than cooked product from Foot and Mouth affected countries, then a whole new vista of markets could appear.

In this situation, the US market would become open to competition from the South American countries and Australia would not be a "preferred" exporting country. It would have to fight for access to the market on a competitive basis with the others. Although the US market is traditionally a high price market, this type of hard competition would affect US prices. The US imposes quotas on its importers so that meat imports are carefully monitored and controlled. Australia's quota would obviously be reviewed.

A limited opening of the American market to frozen product from countries with Foot and Mouth disease would therefore have little value and would only partly help in the quest to find markets for our excess product.

The potential for Australia to produce cooked and canned meat, and market these in competition to existing specialist exporting countries would need to be investigated. It could be that these options could warrant Government subsidisation or incentive. Such aid could help Australian processors to build efficient facilities capable of putting a final product into the market at competitive prices.

Most of the countries that will not take the chilled or frozen product will take cooked and canned product from Foot and Mouth disease affected countries.

Domestic Options

What can be done in Australia to prevent an abrupt collapse of the livestock market? Should Government intervene? Some of the options that could be considered are as follows:-

1. Do nothing, but let the market place sort itself out. The affect of this option has been described earlier in this paper and obviously industry disruption would occur. For those who did not become bankrupt, the future prospects would not be bright. In those areas where there would be no potential to diversify to other industries, those who survived would be severely disadvantaged. Country towns would virtually die and the national economy would be drastically affected.

Perhaps this option may have a place in the situation of a short, confined outbreak, with limited Government intervention.

2. Full Acquisition of the entire production of all meats by the Government through an authority such as AMLC. This is the other end of the spectrum to the first option, and would require alterations to legislation.

An advantage of this is that meat could be purchased based on a series of price grids for various species and types (age, sex, weight) within various regions. Base prices would have to be set for these grids, based on some specific criteria, eg cost of production plus a margin.

A considerable workforce would be needed to create and maintain the necessary grids and kill schedules around the country and to co-ordinate the movement of meat to either markets or cold stores. These could be drawn from existing industry staff.

Government support could be needed to develop the necessary freezer/cold storage capacity required to store excess product.

It would require close co-operation and support from the meat processors who would be required to kill, process and store the meat product on behalf of the Government.

If the bans are likely to be only for one year, the prospects beyond that period are more positive. The need for continued full acquisition would no longer exist as overseas markets are re-built.

Under these circumstances the full acquisition of product would cease, probably after 12 months but before 18 months from the time of the imposition of bans. Funds would therefore be required only for this period. The authority organising the system would have to have the power to set domestic prices for all domestic red meat, wool, dairy product and livestock. It would also have to have the power to act as a sole negotiator on export markets.

Obviously the sale of wool, meat and dairy product on world markets would be difficult, prices would be low in order to make sales and severe losses in trading would result. This deficit would depend on how low the export prices are forced and how much income from domestic sales, if any, would be diverted to help cover the deficit. The deficit would have to be underwritten by the Federal Government.

There would need to be discussions relating to the forms of animal production that were "acceptable" under the altered circumstances, and those that should be altered or phased out. Supply management would become essential, requiring the development of a controlled flow of product from producer to market/cold store. One way to influence supply management would be to vary the acquisition price, ie a low price would discourage supply, a high price would encourage increased marketings.

The vexed question of compensation would be handled under this system by paying those farmers with slaughtered animals at the grid rate for the species, type and region applicable, at the ruling price at the time of slaughter. This would ensure that they were paid at an equitable and comparable rate.

It should be noted that a high acquisition price would encourage the level of slaughterings, thus causing the storage of large tonnages of meat that would carry the Foot and Mouth brand, and would therefore be difficult to market. A low acquisition price would discourage farmers from selling, so that on farm stocks would increase. If bans were lifted quickly, these animals could then be slaughtered for the "clean" export market when it re-opened.

3. Buffer Funds

The question of whether the Government should pick up the full bill for a disaster of this type, thus spreading the cost across the total population, should be considered. If it is considered that the concerned industries should be involved in insuring against disaster, then the concept of a producer funded buffer fund could be valid.

This would have to operate on a levy basis, imposed on all relevant products, ie livestock, wool, milk and milk products, etc.

The existence of an industry funded buffer fund for disaster use could be one way of convincing Government of the need for it to underwrite an industry salvage scheme such as product acquisition, producer income subsidy, price support schemes etc.

4. Compensation

At the Seminar on Exotic Animal Disease Emergency held at this college in March 1980 (14), it was suggested that "producers expect full compensation to be paid to those unfortunate enough to have the disease in their herds or flocks, and fully endorse provisions that spread the cost of compensation over the entire community". It was also suggested that their compensation be "at values before the outbreak".

Let us consider the implications of these statements.

If we accept the scenarios suggested previously in this paper, livestock prices will plummet throughout the country. Even if the disease is immediately contained, prices will fall drastically.

Under these circumstances, the persons who have their livestock slaughtered in order to contain the disease outbreak will be compensated at full cost. Everyone else in the community will be forced to accept the developing low prices. This means that the small proportion of people who have their livestock slaughtered will be the only producers in the community to receive full compensation and therefore be well paid for their livestock.

There are two arguments relating to the level at which farmers should be compensated for slaughtered animals. One argument that is used to support full compensation is that a producer should have an incentive to report suspicious disease symptoms. He may not be inclined to report this if he believes he will be disadvantaged by the compensation values.

The argument against full compensation payment is that those farmers who are compensated at the ruling rate at the start of the outbreak are too well paid relative to farmers having animals slaughtered, or trying to sell, at a later date when the prices have dropped. Obviously these arguments will have to be researched thoroughly.

It is suggested that the authorities, farmer organisations etc should be preparing producers for the possibility of an outbreak through good public relations activities. The incentive should be that to not report will cause a much longer time-frame of disaster which will affect all producers, the farmer included. He should be assured that he will not be disadvantaged any more than his neighbours or peers in the industry.

5. Reconstruction/Diversification Payment

This would involve Government financial assistance to those farmers who have the potential to move from livestock production to other rural enterprises. If adopted, this should be sufficient to create an incentive for producers to follow this course.

6. Producer Income Subsidisation

Another option is that the Government could let the market take its own course, with its attendant financial implications and subsidise the incomes of rural producers.

This could be a cheaper option than others if the disaster is short lived (12-18 months). There are 133,000 livestock producers in Australia (17), all of whom would be affected to varying degrees by a disaster of this type. However, it is not simply a matter of paying a subsidy to these producers, as they would be forced to lay-off a large proportion of their rural workers, who would then become eligible for government assistance.

7. Price Support Schemes

In this alternative, the Government could create minimum and maximum prices on all classes of livestock for sale. These prices would relate to a price index system that would fluctuate with supply and demand. However, base "disaster" minima would be designated for each class of livestock below which prices could not legally fall.

Such a system would even-out the fluctuations in price in a reasonable market environment. However, in a disaster situation, the disaster minimum could be expected to be reached fairly quickly.

This system would require strenuous policing, as attempts to create "blackmarket" trading would quickly occur. These would have to be recognised and prosecuted rapidly if the system was to have any chance of success.

CONCLUSIONS:

A Foot and Mouth disease outbreak would have disastrous effects on all aspects of rural life, with repercussions on the National Economy. The larger the outbreak, the greater the disaster and its national effect. This cannot be ignored by Government.

Government intervention is recommended immediately an outbreak occurs, according to a specific line of action defined in a marketing contingency plan created for this purpose. The SCA Committee mentioned earlier in this paper will probably be looking into all the options in order to select and recommend a single system

If it is decided that Government intervention is required, an immediate freeze on the sale of all livestock, Australia-wide, is suggested in order to prevent the type of price fall that would occur in the absence of intervention. The contingency plan mentioned above would then be brought into action, within a few days of the disease outbreak being confirmed.

The contingency plan that is developed will obviously be chosen from the many options that have been discussed. Total acquisition is certainly a major, but expensive option and must be considered.

The buffer fund concept will need discussion as will the need for Government to give financial support to the development of existing and extra freezer space for unsold meat product. The cooked meat/canned meat marketing expansion potential is another area requiring discussion.

In line with the above contingency plan, it is also suggested that there is a need to develop a public relations contingency plan that will look at both consumer attitude to "diseased" meat, and how to overcome this problem, as well as the export connotations of a disaster of this type.

Although this paper attempts to define those industries that will be affected by a Foot and Mouth disease outbreak, and to quantify the problem where possible, it is obvious that there is a need to more clearly evaluate the impact of a Foot and Mouth disease outbreak, in quantitative terms at least, on both domestic and export markets for meat and livestock products.

In most instances in this paper, the pig industry has been included in comments relating to marketing and sociological impact. However in any further development of marketing contingency plans of this type, it will be essential for the pig industry to be included in the development of these plans.

Australia has developed a well honed contingency plan for dealing with and eradicating a Foot and Mouth disease outbreak. It is essential that a parallel marketing contingency plan be developed to prevent the economic disaster that would arise from such an outbreak.

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THE ROLE AND FUNCTIONS OF THE NATURAL DISASTER ORGANISATIONMR J BARR

FUNCTION AND ROLES

The domestic function of NDO is to mitigate the effects of disasters at the request of State and Territory counter disaster organisations, in conjunction with the Defence Force, Commonwealth Government Departments and other Government and non-government organisations, and to support the development of a core civil defence capability.

The roles which result from the NDO functions are:

- . Development of national counter disaster plans;
- . Management of limited physical and financial programs in support of State/Territory Emergency Service Organisations;
- . Co-ordination of Commonwealth Government physical assistance during the response and short term relief phase of disasters;
- . Development of civil defence planning in conjunction with other Commonwealth Departments and the States and Territories;
- . Operation of the National Emergency Operations Centre (NEOC);
- . Direction of activities of the Australian Counter Disaster College.

The NDO may be involved in all types of disasters, whether they be natural, man made or as a result of hostilities. It does not become involved in aid to the civil power, that is the maintenance of law and order in the events of acts such as terrorism. However, if a major disaster occurred as a result of an act or terrorism the NDO could become involved in counter disaster activities.

During specialised disasters, such as exotic animal disease outbreaks, NDO works in close co-operation with relevant Commonwealth agencies. Joint planning for such disasters includes coverage of the delineation of responsibilities, mutual alerting procedures, exchange of information and the co-operation between respective operations centres.

NDO has a second function in relation to overseas disasters during which it acts as managing agent for the Australian

Development Assistance Bureau in co-ordinating the provision of physical assistance to Papua New Guinea and the South West Pacific nations. (This function may be extended to cover other nations by agreement between the Ministers for Foreign Affairs and Defence).

The roles which result from this function are:

- Development of national plans for the provision of Australian disaster relief to overseas countries;
- Co-ordination of the provision of Australian Government or combined Government and non-government assistance during the response and short term relief phases of overseas disasters;
- Liaison with international and national disaster relief organisations and agencies; and
- Support for disaster related consultancy, training, support and similar activities in overseas countries as necessary.

ORGANISATION

The chart at Annex 'A' outlines the organisation of NDO. The organisation has three key elements:

1. The Policy and Support Section which is primarily involved in policy aspects and management of financial support programs.
2. The Plans and Operations Section which handles the operational side of activities (although all staff become operational staff when a disaster occurs).
3. The Australian Counter Disaster College, located at Mt Macedon in Victoria, trains selected personnel in counter disaster planning and operational management, with limited research into selected aspects of disasters. The College has a staff of fifty.

The NDO Canberra has a staff of only 14, of whom five are servicemen, including the Director General.

NATIONAL EMERGENCY OPERATIONS CENTRE

The management co-ordination role during operations is undertaken through NDO's Operations Centre, titled the National Emergency Operations Centre - NEOC for short.

The NEOC provides the focal point for the co-ordination of national effort in disasters, where appropriate. It is through this Centre that the provision of physical resources available

from the Commonwealth is co-ordinated when assistance or support is requested by State and Territory authorities in the event of a disaster.

The NDO is unable to act or respond effectively without information from State authorities relating to the disaster, and information on the availability of Commonwealth resources which can be supplied by each Department. Such information is vital for arranging quick responses to requests, and also in providing accurate and up to date situation reports to the Governments and the media.

Although the NDO has only a small permanent staff to man the Operations Centre, there is available on-call a supplementary staff of eighteen nominated Servicemen, known as the Defence Force Panel, who back up NDO staff during protracted operations.

DISASTER SERVICE LIAISON OFFICERS

To facilitate co-ordination, Disaster Service Liaison Officers (DSLOs) have been nominated by departments and organisations which have or could have, a responsibility or capability in disaster situations. Some 23 Commonwealth Departments and organisations have nominated DSLOs who may work with NDO, either from their offices, or at NDO, depending on the size and nature of the disaster. Some Commonwealth Departments represented by DSLOs are:

Prime Minister and Cabinet

Finance

Defence

Aviation

Social Security

Australian Federal Police

Transport

Local Government and Administrative Services

Health

Primary Industry, and

Housing and Construction

Each Department which is represented covers a different functional area and each DSLO has certain departmental management procedures within which he has to work.

The important functions of a DSLO are to:

- Ascertain the Availability of Resources
- Implement the Provision of Resources
- Keep their Parent Agency informed of the developing situation
- Keep NDO informed
- Liaise with Other DSLO's
- Maintain Records

DSLO COMMITTEES

To facilitate the efficient deployment of resources and to assist co-ordination between departments and authorities with similar expertise, interests or resource capabilities, a system of DSLO committees has been established and is activated during disaster response operations. The committees are made up of appropriate DSLOs who discuss the best method of meeting any particular request for assistance. Four standard committees cover the basic requirements for assistance with Health, Equipment, Welfare and Accommodation, and Transport. Other committees may be formed on an 'ad hoc' basis to meet the requirements of a particular request or to organise a particular activity, such as evacuation, which involves a wide range of agency involvement.

ACTIVATION OF THE NEOC

During normal working hours, the NEOC is manned by NDO permanent staff who work in and around the centre on routine duties. Outside working hours a duty officer is available.

When the staff becomes aware of a disaster or potential disaster in Australia or the surrounding region, information gathering and dissemination to appropriate Government and non-Government agencies begins.

Depending on circumstances, the Director General may ask that nominated Commonwealth resources be brought to a particular state of readiness.

Any request for Commonwealth physical assistance must be passed to NDO through designated authorities. These are:

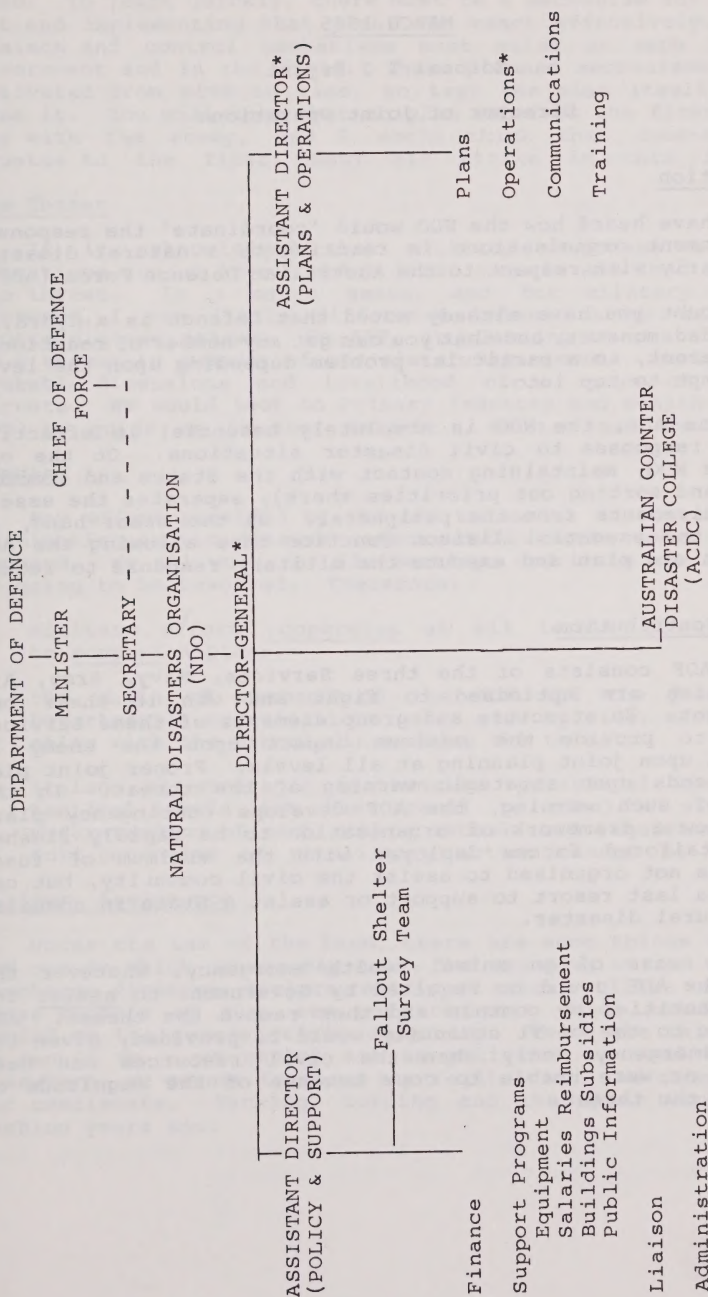
- For Australian States and Territories - State or Territory Officials, normally the Commissioner of Police, nominated by the State or Territory Government;
- for Overseas Countries - the national Government, through the appropriate Australian Mission and the Department of Foreign Affairs (Australian Development Assistance Bureau).

For constitutional and diplomatic reasons Commonwealth resources are not deployed without such a request being received.

As requests for assistance are received, a continual assessment is made of the NEOC staff required to provide prompt and effective means of meeting the needs. Appropriate members of the Defence Force Panel and appropriate DSLO's are called out and the centre remains activated until the response and short term relief stages of the disaster are over.

Natural Disasters Organisation

February 1985



*Defence Force Position

ADF PRESENTATION TO ANIMAL HEALTH EMERGENCIES STUDYMARCH 1985

Colonel I J Bryant

Director of Joint Operations

Introduction

1. You have heard how the NDO would 'coordinate' the responses of Government organisations in reacting to a natural disaster particularly with respect to the Australian Defence Force (ADF).

2. No doubt you have already noted that Defence is a Hydra, a many-headed monster, and that you can get any number of reactions, all different, to a particular problem depending upon the level you attempt to tap into.

3. To the ADF, the NDO is absolutely essential in effective military responses to civil disaster situations. On the one hand, the NDO, maintaining contact with the States and Commonwealth (and sorting out priorities there), separates the essential requirements from the peripheral. On the other hand, it performs the essential liaison function thus allowing the ADF to get on and plan and execute the military response to requests made.

The ADF Contribution

4. The ADF consists of the three Services, Navy, Army, Air Force, which are optimised to fight and win in their own environment. To structure and group elements of these Services together to provide the maximum impact upon the enemy is dependent upon joint planning at all levels. Proper joint planning depends upon strategic warning of the threat. In the absence of such warning, the ADF develops contingency plans which allow a framework of organisation to be rapidly fleshed out and tailored forces deployed with the minimum of fuss. The ADF is not organised to assist the civil community, but can react as a last resort to support or assist a State in combatting a natural disaster.

5. In the case of an animal health emergency, whatever the nature, the ADF could be required by Government to assist the civil authorities to contain and then remove the threat. ADF assistance to the civil community would be provided, given the type of emergency, only when the civil resources has been exhausted or were unable to cope because of the magnitude or extent of the threat.

6. To react properly to an emergency, there must be a framework plan. To react quickly, there must be a mechanism for fleshing out and implementing that plan. To react effectively, dormant liaison and control mechanisms must exist at each level of government and in the field. These planned mechanisms must be activated from time to time, to test the plan itself, and to tune it. You will know that no plan survives the first encounter with the enemy, and I would think that foot-and-mouth equates to the first enemy air strike in this instance.

The Threat

7. It is acknowledged that military responses to threat situations are at levels which first contain and then eliminate the threat. In a macro sense, and for military planning purposes, I see little difference between armed attack and exotic disease attack. HQ ADF, in planning to react properly to a threat in support of our sister Departments, must know the probable dimensions and likelihood of a range of possible threats. We would look to Primary Industry and Health (through NDO) to guide us in that respect. We are not the experts.

Command

8. Any effort provided by the ADF to assist in containing and eliminating exotic disease attack would remain under military command. We all work for Kim Beazley, and it is his ADF which is going to be involved. Therefore:

- a. military effort cooperates at all levels of government to support a plan;
- b. the chain of command of the ADF and the policy lead Department's organisations exist side by side, each cooperating with the other's in meeting the threat;
- c. liaison at strategic (national), operational (State) and tactical levels (at the scene) is vital - without an understanding of each others methods and requirements, the full potential of retaliatory action cannot be focussed.

Military Assistance

9. Under the Law of the Land, there are some things which the ADF can do which others may not - for example, we can carry and discharge firearms, declare restricted areas, utilise to the full those factors of air, sea and transport which under law are denied to the general civil community. There are things which we cannot do - we cannot act as policemen on road blocks or elsewhere, we cannot trespass nor requisition. We cannot arrest nor confiscate. Sacking, burning and the other went out of fashion years ago.

10. Any assistance sought must:

- a. Utilise the organisational and legal strengths and capabilities of the ADF, and
- b. abide by the Law of the Land - to do otherwise will invite a refusal from a military officer commanding who remains responsible for the safety and conduct under civil and military law, of his command at all times.

11. The more common areas where I think that civil resources will be quickly eaten up and ADF assistance requested, would be as follows:

- a. aerial recon and perhaps shooting;
- b. assistance with engineer plant - burying and burning carcasses;
- c. flying in troops;
- d. road transport support;
- e. field accommodation and cooking;
- f. assistance with communications;
- g. perhaps the loan of arms/ammunition to State authorities (not to individuals);
- h. decontamination (we practice NBC defence);
- i. provision of specialist equipment and operators - from flamethrowers and generators to training equipment;
- j. use of the Defence infrastructure, which is Commonwealth and State wide, and is very considerable indeed.

Who pays?

12. The question of 'who pays' is on Defence lips nowadays as much as anyone. The quick answer is that animal health emergency requires an emergency response from the top down. The government would assume some financial responsibility, and we would have to forego other activities. Nevertheless, we also would expect the States and our sister Departments to do all they could from their own resources first.

Summary

13. In summary, we the ADF need:

- a. an outline plan - what is the threat and, generally, what assistance do you think you might require;

- b. we would want to know the chain of command for the whole operation;
- c. Where are the liaison links to be established, and by whom?;
- d. Where, what, when, did the threat materialise, and what do you want done?

To obtain a coordinated response, we need a coordinated plan. To make a plan work, it needs an interdisciplinary approach. Finally, a plan needs to be tested before the event.

A few words however, on what I have heard so far:

- a. in the first place, why must a State look only to the Commonwealth in emergency? The police for years have transferred their assets across borders. Why not inter State reinforcement?
- b. beware of the big exercise and the over detailed plan. Use small scale exercises often - the bigger the exercise the less is learned. The time lag is always in the staff action, and not the troops on the ground.

APPENDIX 10
TO ANNEX D

TRAINING AND TEST EXERCISES NEEDS.

J.G.Tremlett.
Australian Bureau of Animal Health.

Introduction

The implementation of any control programme necessitates the establishment of an efficient, competent and responsive group which has the capability to overcome the problem in the most enlightened and efficient manner. To achieve this aim, planning is required to identify the needs of such programmes. This should include all those likely to be involved, and this to be followed by appropriate training.

Objectives

The current position since the previous Mt. Macedon Exotic Animal Disease Emergency Seminar held in 1980, is one in which careful planning has been the main thrust by those responsible for disease control. Existing model plans for a number of diseases have been revised or are being revised. A wider look at the involvement of other Government instrumentalities, industry and services has been a major improvement when determining the requirements of a control programme. There is little doubt the achievements of the previous seminar have made a noticeable impact on rethinking for the future. This has been especially noted in the administration aspect of the programme in which the flow of information, data and accountability of actions has been identified as an essential to the efficient administration of the programme and will assist in the final analysis.

Training

These objectives however can only be achieved by training. Training must form the foundation stone upon which the proposed response to an exotic disease emergency can be achieved successfully within the minimum time. In the previous seminar, references to training were made by a number of speakers. However little indication was given of the way training should proceed, and the overall groups likely to be involved in an exotic disease emergency. The emphasis was orientated more towards professional and technical aspects of such an emergency. It was accepted that staff should be employed in the area they were trained best to do, with appropriate specialists dealing with those tasks in which they held expertise. Although this principle had been identified it was not clear whether the incorporation of a wide spectrum of expertise had been included in training for an exotic disease emergency. A review of possible training and test exercise needs, therefore, might be useful.

Development

In preparing a training schedule a number of important factors should be considered. At the risk of stating the obvious or repeating what is known already, the following suggestion could form the basis of a training programme. It should be remembered that exotic disease emergency procedures may well be outside the preparedness and experience of other existing emergency programmes.

There are two major groups associated with exotic disease emergencies. Those involved directly with disease eradication in the professional and technical aspects and those associated with the administrative support services. In developing the training needs, the major components should be identified into which these needs can be slotted. The emergency activity can be divided into three major strategies.

The first strategy is associated with pre-emergency situations involving general preparedness, estimating the probabilities of a disease challenge arising, its epidemiology, recognition, species affected, etc., the likely risk enterprises which could be involved, and the available resource enterprises. An assessment is needed also on the degree of education required for the community at risk, preparation and revision of emergency disease plans, and the training of those involved with the response and rehabilitation to the emergency.

The second strategy involves the response to such an emergency with activation and implementation in full, of the first stage strategy. The degree of response will depend on the disease detected but basically will be concerned with eradication, surveillance and associated heavy administrative and communication commitment.

The third strategy concerns the recovery and rehabilitation phase in which a complete restructuring of the farming practice could occur, managing funds received for compensation and rehabilitation of individuals or families whose livelihood may have been dramatically altered. Catastrophes resulting from exotic diseases are likely to have a different impact on the community than those caused by "the wrath of the gods" or related phenomena. The probability exists for a greater human emotional response, particularly where the destruction of animals is engineered and need not necessarily have resulted from the disease itself.

At present it appears that strategy 1 is being actively pursued, strategy 2 is probably the most advanced of the emergency programmes whereas strategy 3 is one which has been largely deferred but needs urgent review.

Targets

Training for each Target Group should be specific, i.e. each task should be defined, resource needs identified, and the special skills required for those tasks be analysed. A system should be designed to prove how effective is the training. The training requirements can be identified into Animal Health (Veterinary) and Administrative (Non_Veterinary). Within these divisions, tasks and degree of training can be further sub-divided;

Veterinary

Non-Veterinary

Category 1.

Fully conversant with control plans and principles of disease control/eradication

Fully conversant with response to emergencies and detailed knowledge of administration requirements

Category 2.

Fully conversant with practical application of all aspects of disease control programme

Fully conversant with practical application of all aspects of an emergency situation

Category 3.

Concerned with situations on the periphery of an outbreak

Aware of emergency procedures and operate as leaders of kindred groups

Category 4.

Elementary knowledge of animal health matters

Community likely to receive direct impact of emergency programme

Determination as to the staff or groups to be included in each of the Categories, will be based on the structure of each State Animal Health Division and its relationship to other government, semi-government, statutory or private organisations. It is imperative that all personnel and organisations be identified and included within these four Categories. Omissions in the planning and training programmes could raise unnecessary problems during an emergency.

Training Application

Preliminary stage. The first step is planning to identify and develop the training programmes. This requires detailed examination and preparation of duty statements for each post or group, task list, task analysis in detail and skills analysis. A series of training packages can then be devised.

Intermediate stage. Workshops should then be organised and these in turn succeeded by Tactical Exercises Without Troops (TEWTS). This system should permit resolution of problems in the training packages and individuals, to be resolved. Furthermore it is possible to conduct TEWTS in selected areas. TEWTS in particular offer the most satisfactory form of training with the optimum return and the minimal cost.

Final stage. This will involve field exercises of varying durations. However this stage should be deferred if possible until the organisers are satisfied that the first two stages have been fully tested and proved satisfactory. This is important since it is not practicable to train everyone to the peak of efficiency all the time. It is recommended therefore, that a key group of fully trained staff is maintained at peak efficiency. This group can be maintained at this level of alertness by continual updates of their material, monitoring changes in their area, improvements in details of the first two stages, and periodic tutorials. On this group will hinge the efficiency and success of field exercises.

Funding

To achieve these training objectives, adequate funds must be available. When estimating for "normal" emergencies e.g. fires, floods or even earthquakes there is often prior experience on which to base cost estimates. However in the case of an exotic disease emergency, there is no precedent in Australia on which to base an estimate of the cost an extensive and devastating exotic disease. Costs are available from the experience of other countries, but these reflect mainly, operating costs more than costs to industry. Australia is predominately an exporting country, therefore such an impact would have wider implications than simply eradication costs. The loss in export and nett industry revenue could be between 15-90% on current figures. When translated into funds allocated for training, the amount, at best, can be described as miniscule, and quite inadequate to establish training programmes. Funds must be made available which bear a relationship to the cost of an actual emergency.

Conclusion

Each State and Territory is responsible for the control of an exotic disease should it appear within its borders. There has been a tendency therefore for each State and Territory to proceed with its own emergency programmes, albeit adhering to agreed plans but with little direct involvement with other States . In many instances support groups are present but often as observers, without being able to carry out their emergency role in full - a limitation of exercises.

Many of these difficulties must be overcome and here the Commonwealth could become involved to a greater extent in exotic disease training, to good effect, by reviewing the role of possible coordinator and provider of funds. At present the Commonwealth offers protection to the animal industries through the quarantine services which minimise the risk of disease introduction by coastal surveillance and qualified import protocols. Recently it has enhanced its capability by establishing ANAHL. Limited funds have also been made available, for specific projects. In other aspects the Commonwealth has coordinated the preparation of exotic disease emergency plans. Despite all these contributions it is felt that greater involvement by the Commonwealth is essential particularly with assistance with coordination and funding of emergency disease preparedness throughout Australia, on a national basis. The Commonwealth will be heavily committed in the face of an outbreak and will pay 50% of the eradication costs. Therefore it has a vital interest in ensuring that all States are adequately prepared, and that a nationally coordinated campaign will be mounted without delay. It seems reasonable therefore, for the Commonwealth to consider accepting this role and associated responsibilities . However, its acceptance would be dependant upon obtaining adequate funding. It should be stated also, that training is a continuous operation that has to be maintained on a regular basis, particularly as staff changes occur which may alter the key groups. Regular and adequate funding is a small insurance premium to pay for a national exotic disease preparedness programme.

EXOTIC DISEASE TEST EXERCISESTHE VICTORIAN EXPERIENCE

J. R. SALISBURY, M.V.Sc., DEPARTMENT OF AGRICULTURE, VICTORIA

Preparation

Victoria, like other states and countries, has been guilty in the past of running test exercises using inadequate plans, insufficiently defined objectives and vague game rules. Such exercises quickly depart from reality and result in confusion and frustration. Their only value is that they convince people of the amount of planning remaining to be done.

At the time of the Exotic Animal Disease Emergency Seminar held at the Australian Counter Disaster College, Macedon in March, 1980, Victoria's plans for dealing with exotic diseases were embodied in a single manual held within the Department of Agriculture. We realised the need to take our planning a lot further, but did not appreciate the contribution that professional counter-disaster planners could make to the process. After the seminar we set about :-

- Revision of the Vesicular Diseases Manual - completed in March 1981.
- The preparation of the Victorian Animal Disease Emergency Plan (VADEP) which became part of the Victorian State Disaster Plan in 1982.
- The preparation of an extensive Job Card System, after a trip to New Zealand in March 1982 convinced me of the need for such a system. This was substantially completed in 1983.
- Collaboration with officers of the Australian Bureau of Animal Health in the development of the Animal Health Emergency Information System (ANEMIS). This system was in working order by 1983 and its development continues, with each State modifying it to its own needs.

It was not until October, 1983 that we believed we were ready to run another test exercise. Six years had elapsed since the last large-scale exercise. I believe that the delay was well justified on the basis that all of the above plans and systems were developed in consultation with the people who would potentially use them. The involvement of people inside and outside the Department of Agriculture meant that they were substantially trained as a result of their involvement in the planning process.

Apart from the training and awareness value of this process, it has led to systems that most people are comfortable with. This contrasts with the tendency seen in both the public and private sectors for management information systems to be developed in isolation by systems wizards. Operational managers are then expected to distort descriptions of the work they do to fit the system, instead of the system being developed to describe and monitor real activity.

Setting Objectives

We decided on three objectives to be met by the exercise at Pakenham in 1983.

1. To train our staff to set up and run a Regional Emergency Centre, thus testing the adequacy of plans, procedures and information systems.
2. To test VADEP procedures by involving the State Emergency Service, Police and Telecom.
3. To test our public relations plans, and consequently create awareness of the exotic disease threat and our preparations.

We also activated the Exotic Disease Operations Centre (EDOC) in Head Office to test communication and information flows between EDOC and the REC.

Test Exercises - Lessons Learned

To effectively manage a REC, an officer needs expertise in three areas - disease, industries and planning. An experienced veterinary officer is assumed to have the required levels of knowledge of disease and the primary industries before embarking on a test exercise, and to have access to specialists in those areas. He will also have received training in the use of plans and procedures.

The Pakenham racecourse was chosen as the site for the REC. In the interests of economy, we departed from reality by carrying out a number of preparations in advance :-

- There was substantial forward publicity in the area, to avoid rumours of a real outbreak and generate interest.
- All staff were forwarned, including the District Veterinary Officer who was to receive a telephone call from a co-operating farmer reporting a phantom outbreak.
- Communications were installed in advance. These included a switchboard, direct line telephones, telex and facsimile reproduction equipment.

We further departed from reality by not requiring field teams visiting properties to undergo personal or vehicle disinfection. No slaughter or disposal was carried out, but feasibility studies were done.

The exercise commenced with the DVO visiting the farm, tentatively diagnosing foot and mouth disease and reporting to his Regional Veterinary Officer to set the exercise in motion.

It is not necessary to describe the exercise in detail at this study, because a similar exercise is to be treated as a case study. The most significant lessons we learned were :

1. The media must be adequately catered for without permitting interference to the operations of the centre. Because Pakenham is close to Melbourne, the metropolitan media as well as the locals descended on us in helicopters and cars, and the REC was for some hours a tangle of video and press cameras, microphones and reporters. We welcomed their interest but demands for interviews placed unacceptable pressure on the Officer-in-Charge and other senior officers.
2. Inadequate attention was given to the running of the campaign during the critical period when the OIC was in transit from the office to the REC.

3. Team leaders had received inadequate training. Their roles were not defined accurately and as a result they did not have an appreciation of the roles of other teams and the interaction required. Role descriptions have since been completed.
4. Inadequate training had been given in briefing and de-briefing procedures. As a result the level of reporting from field teams was unsatisfactory. This was not due to lack of motivation or dedication by the teams themselves.
5. Some criticisms were received of our departures from reality because we had not adequately explained the reasons for them.
6. Staff in other regions were asked to participate in tracing suspect livestock but were not told whether to do this in fact or on paper, or whether they should stop stock movements from the properties concerned. Nor were they told when the exercise was over.
7. There was an understandable obsession with getting the systems right, with a tendency to forget about eradicating the disease.

Obviously, with these lessons learned, the exercise has been of inestimable value. The Regional Veterinary Officer followed it up with a one-day paper exercise for his staff a few months later in which all aspects of the exercise were re-examined in detail.

Two further exercises have been held, at Yarram (south-eastern Victoria) in late 1983 and Cohuna (north-western Victoria) in mid-1984. Paper exercises are planned at Hamilton and Wangaratta in April and June 1985.

We have learned a lot about our systems, the way people operate, the detail of preparations required and the business of running exercises. We have been reasonably successful in applying the lessons learned in each exercise to succeeding ones. However, each exercise involves fresh people who have not been subjected to the same processes. All instructions and procedures therefore need to be clear and unambiguous, as they will certainly need to be when we are faced with the real thing.

General Comments

In addition to the specific lessons learned from the exercises, some more general observations need to be made.

1. There are insufficient senior veterinarians adequately trained to make some of the critical decisions to be made in running an outbreak of foot and mouth disease. A surprising variety of solutions have been offered to solve the same problems in exercises.
2. Of necessity we involve local people in local exercises. The situation would probably be reversed in an outbreak with many local officers needing to remain at their posts, and operational staff being brought in from other regions or states and overseas.
3. When specific activities are omitted from exercises it is necessary to decide whether these activities need to be the subject of specific purpose test exercises.

These may include :

- publicising and enforcing restrictions.
- arrangements for risk enterprises such as milk and meat.
- mapping over wide areas.
- specific communication problems.
- wild animal control or monitoring.
- accounting procedures.

4. We still have problems in defining information interchange between the REC and EDOC, and levels of delegation of authority.
5. At this stage there has been minimal involvement of local government in plans and procedures. However the thrust of the State Disaster Plan is now in this direction in Victoria and we will need to make the most of the opportunities presented.

AUSTRALIAN COUNTER DISASTER COLLEGEANIMAL HEALTH EMERGENCIES STUDY

11 -15 March 1985

THE DISCUSSION EXERCISEThe Exercise Setting

1. In July 1984, the Victorian Department of Agriculture conducted a test exercise in the Cohuna area in the north of Victoria, close to the New South Wales border. The test exercise was based on a simulated outbreak of foot and mouth disease in that area.

2. The discussion exercise for this study treated the Cohuna test exercise scenario as representing an actual outbreak of foot and mouth disease, for purposes of discussion. The scenario was presented, in case study form, by Dr Chris Bunn, the Regional Veterinary Officer within whose area of responsibility Cohuna lies, and his staff. Maps, records and documentation used in connection with the Cohuna test exercise were made available to the syndicates, as appropriate, so that a common framework for discussion was established.

The Syndicates

3. Six syndicates were formed, to consider aspects of the management of an animal health emergency, using the Cohuna scenario as a discussion framework. Each syndicate was required to address a series of specific questions related to the chosen area of management; outside this, it was suggested that syndicates should consider themselves unconstrained other than by reasonable assumptions as to the development of the 'incident' depicted in the scenario.

4. Delegates were invited to nominate to take part in syndicate discussion of the topic of their choice. Each syndicate had available to it advice from members of the Working Party, members of the Victorian Department of Agriculture who had participated in the Cohuna test exercise, and College staff. Contact between syndicates which were likely to touch on common themes (eg. Syndicates 1 and 2) was encouraged.

The Syndicate Presentations

5. Each syndicate presented centrally, with a 45 minute period available for presentaion and central discussion, over the last two days of the study.

6. General syndicate topics were as follows (the report of each syndicate is attached as an appendix to this annex, as shown):

<u>Syndicate</u>	<u>Topic</u>	<u>Appendix</u>
1	<u>Disease Control</u>	1
	Dealing with the animal health emergency disease control decisions that must be made, without detailed consideration of logistics or resource management.	Page 160
2	<u>Operational Support</u>	2
	Considering the organisation and resources needed to support the disease control program.	Page 166
3	<u>Legal and Financial Aspects</u>	3
	Considering all legal and financial implications of the operation.	Page 178
4	<u>Emergency Centre Management</u>	4
	Considering physical and organisational aspects of emergency centre management.	Page 183
5	<u>Information Management</u>	5
	Considering the collection, analysis and distribution of information required to manage the outbreak.	Page 191
6	<u>Public Relations</u>	6
	Considering the need for and development of an effective public relations coverage of the operation.	Page 201

Appendices Attached

SYNDICATE 1DISEASE CONTROLQuestion 1: Immediate Steps to Contain the Disease.Principles

- a. Stop movement on infected and contiguous properties;
- b. Activate Victorian State Disease Plan;
- c. Slaughter - animals with lesions immediately; and
all in-contacts preferably that day.
- d. Traceback/over critical period and traceforward/over critical period.
- e. Set up REC.

Question 2: Geographical Limits.Principles

- a. Define an area where there is reasonable suspicion that transmission has or could occur;
- b. Areas defined in accordance with descending degree of risk and movement restrictions applied accordingly;
- c. Factors used in risk assessment will come from tracings;
- d. Situation is "fluid" and must be continually re-assessed;
- e. Boundaries must be tempered by practical (topographical, roads) considerations.

Factors Known (Day 1)

- a. Recent lesions;
- b. 2 vehicle contacts;
- c. Saleyard contact;
- d. Weigh vehicle content;
- e. Cheese factory;

Factors Known (Day 1) contd

- f. 2 Primary tracings on contiguous properties;
- g. Private vets;
- h. Main road;
- i. Feral animals; and
- j. Intensive agriculture.

Infected Area (Day 1)

- a. No movement of animal, article or thing on or off infected area properties;
- b. 24 hours surveillance;
- c. infected area expanded because of known contact with infected premises in adjacent properties.

Protected Area (Day 1)

- a. This area takes into account known or potential contacts:
 - and will result in restrictions on animal and animal product movement "in and out" under permit.
- b. With the "permit" rider in mind :
 - no movement to slaughter within 14 days - (welfare considerations may modify).
 - no meat/meat product movements within 14 days.
 - allow production at Kraft after -
 - (i) disinfection of fleet/equipment;
 - (ii) trace/check/hold cheese;
 - (iii) tankers from single points followed by disinfection after production re-commences; and
 - (iv) product held till investigations completed.
- c. Private vehicles free movement.
- d. Commercial vehicles stop, search, log.

Protected Area (Day 1) contd.

e. Protected area on Day 1 defined as area bounded by:

(i) Murray River and

(ii) Roads from :

- Koondrook;
- Kerang;
- Quambatook;
- Boort;
- Pyramid Hill; and
- Patho (including Gunbower Island)

Control Area

a. Victoria defined as control area; and

b. Victorian definition adequate.

Question 3: Protection of Piggeries.Factors and Deductions

- a. No milk has been sent to the factories by the infected farms after 8/6/84;
- b. Whey and milk by-products were fed to pigs on known infected properties on a regular basis from factories at Leitchville (Kraft) and Rochester (Murray Goulbourn);
- c. Therefore we consider that there is a high possibility of mechanical transmission in transport vehicles to factory areas and other farms;
- d. Tracebacks and forward must be made of supply clients from both factories;
- e. Slaughter pigs which have been in either direct or indirect contact, via the medium of the feeding of milk by-products fed from the particular by-product delivery truck or trucks;
- f. Close surveillance of other by-product fed to pigs from both factories;

Question 3 (contd)

- g. Monitor sanitation of by-product delivery trucks at the factory depots. A stock inspector must be posted to both factories for this purpose;
- h. Cease all deliveries of milk by-products to all clients of these factories.

Question 4 : Feral Pigs and Marsupials.

Recommendations on controlling feral and other wild animals are made with a knowledge that:

- a. Pig-infested Gunbower Island (which also has kangaroos) is no contiguous with the infected farms;
- b. the island is separated from the mainland by a flowing anabranch - with small, intensively stocked farms along the Victorian mainland bank;
- c. several bridges connect the island with the Victorian mainland;
- d. farms exist on the island.

Main aim: To not disturb a sedentary population of pigs, not suspected of disease; but to take steps to ensure containment as a precaution in case infection is established.

Recommendations

a. Immediate Action:

- (i) Include the island in the Protected Area;
- (ii) Close off bridges where possible (render pig proof), and erect run-through fences and gates on all other bridges;
- (iii) Trap pigs for blood sampling and examination;
- (iv) Commence free-feeding of bait in case of positive F & M diagnosis;
- (v) Ignore kangaroos and foxes on island;
- (vi) On infected (mainland) properties, request:
 - poisoning of rodents with quick acting poison;
 - poisoning of foxes; and
 - if resources available, fumigation of rabbit warrens;

Recommendations (contd)

- (vii) Survey Protected area and surrounding buffer zone (say 5 km from infected properties) to locate possible infestation of feral animals;
- (viii) Trap and poison feral pigs at Pyramid and wherever detected as under (vii); and
- (ix) Closely liaise with NSW officers.

b. Possible Future Action.

If feral pigs prove positive for Foot and Mouth, use helicopters, intensive poisoning and trapping. Erect heavy gauge pig fencing, possibly along the mainland banks opposite the island. Destroy all cloven footed animals on the island.

Question 5: Dangerous Contact Premises

- a. Two factors to take into account:
 - degree of risk; and
 - implications if premises become infected;
- b. A DCP is one which has had direct or indirect contact with the IP. Slaughter is an option where there is:
 - direct contact; and
 - high risk indirect contact;
- c. Decisions as to slaughter can only be made on the spot using professional judgement and taking into account:
 - (i) logistics/resources;
 - (ii) local knowledge;
 - (iii) consistency of approach;
 - (iv) epidemiological data if available; and
 - (v) public opinion.
- d. In the case in question, in the early stages DCP's are:
 - (i) Piggeries where trucks from infected areas have delivered whey; and
 - (ii) Two adjacent properties to infected premises which received cattle.
- e. It is considered that any susceptible animals should be slaughtered.

Question 5 (contd)

- f. Contiguous properties to infected premises have high risk and need intensive surveillance.

Question 6: Disease Control Function

- a. Continued information derived from tracing via VO/SI surveillance;
- b. Diagnosis - assist decision making in absence of clinical disease/clinical preparation or differential diagnosis with laboratory back-up.
Decision by epidemiologist/OIC/surveillance;
- c. Resource information update - manpower
- plant
- materials.
- d. Meteorological information where applicable.
- e. Socio-economic aspects from any source.

Question 7: Training

- a. OIC of R Centre - DVO.
Epidemiology of disease involved in detail.
- Education and Training in epidemiology of disease;
- b. Control Plan - Training in implementing - Field exercises - preceded by seminar of several days;
- c. Training in management skills via exercises which are long enough to show deficiencies

SYNDICATE 2OPERATIONAL SUPPORT

Problem: Consider the operational support required for the Cohuna case study.

Aim: Provide operational support in eradication F + M in Cohuna area.

Limitations: (1) Contain disease in a circumscribed area.
(2) As soon as possible.
(3) Reduce virus output.

Factors:

1. Population: . distribution
 . resources
2. Terrain: . irrigation
 . high water table
 . river system
 . State Forest
 . farm layouts
 . road system
3. Vectors: . Stock - type & numbers (increases urgency).
 . feral animals
 . traffic
4. Weather: . run-off
 . July - cold
 . irrigation
5. Law: . size of proclaimed area
 . powers
6. Disease: . F + M
 (a) Highly contagious therefore:
 i strict movement controls)
 ii decontamination)*
 iii water disposal)

*decontamination resources concentrated on or near infected properties

(b) Cloven footed animals

- i primary hosts)
- ii destruction)+
- iii disposal)
- iv decontamination)

+colocate specific resources or specific stock farms.

(c) Spread by rodents

- i contain rodents
- ii isolate from infected properties
- iii vermin proof contact areas & destroy rodents
- iv relates to feral animals

Vectors: a) Stock:

- (i) no movement
- (ii) no stock vehicles into area
- (iii) produce - collection) protected
 - disposal) area
- (iv) disinfect vehicles
- (v) permits for movement
- (vi) urgency for destruction

- Saleyards - dispersion (need for tracing)

- b) Feral: (i) large population feral pigs
(ii) fencing of infected areas.
(iii) destroy feral pigs
(iv) muster cattle.
(v) rodent control.

- ```
- large requirement for man-power: .fencing
 .pig control
 .cattle mustering
 .rodent control
```

- c) Traffic (i) by-pass area/main routes  
(ii) internal traffic - priority route  
(iii) no movement of stock trains or vehicles  
(iv) road block system-entry to IP  
-entry to PA  
(v) controls placed on risk enterprises-  
permits for entry

- NSW to look after their side.

Law:

- a) size protected area (?)
- b) powers - of entry & destruction are present.
- c) relations between States.

Time/Space:

1. Close cordon established immediately - discreet communication net (police?).
2. Inspection teams (surveillance) - discreet communication net.
3. Organisation to allow movement:
  - permits
  - decontamination
4. Establishment of destruction team - destroy
  - dispose
  - disinfect

Deduction: right is available to establish HQ, accommodation/support/welfare ready to commence work at first light.

Tasks:

1. Feral animal control.
2. Rodent control
3. Controls on milk factory/limited disinfection
4. Disinfect saleyards
5. Major decontamination points on roads
6. Disinfect properties & Plant
7. Preparations to deal with further outbreaks.

PlanGeneral Outline - 3 Phases

- Phase 1. (a) Immediate cordon on infected and adjacent properties;
- (b) controls on enterprises;
  - (c) diversion of traffic;
  - (d) establishment of HQ's;
  - (e) establishment of liason with NSW authorities;
  - (f) establishment of welfare considerations;
  - (g) commence planning for rodent and feral animal control; and
  - (h) preparation for next days activities.

# Question 1: The Police Response

## Movement & Security

### Directions given:

- Phase 2. (a) Inspect all infected areas properties;  
 (b) Tracing action;  
 (c) Disinfect risk enterprises;  
 (d) Establish traffic control & decontamination organisation;  
 (e) Commence destruction and disposal of livestock;  
 (f) Commence preliminary disinfection;  
 (g) Commence rodent control on infected properties; and  
 (h) commence feral animal control in forest area.
- Phase 3 (a) Continue surveillance & reinspection; and  
 (b) Commence major disinfection of infected & d.i.c. properties.



# Question 1: The Police Response

## Movement & Security

### Directions given:

- (a) Complete standstill in Infected Area;
- (b) No stock movement out of Protected Area; and
- (c) Assistance with tracing in Controlled Area .

### Need to Consider:

- (a) Guards on Infected Properties;
- (b) Officer with each slaughter team;
- (c) Road blocks [Permit checking system.];
- (d) Control structure;
- (e) Relief and welfare;
- (f) Mobile support; and
- (g) Communications.

### Resources:

Local: 2 Sergeants + 14

District support available: 13 ex Traffic support Group  
(Bendigo etc.)

On standby: all others.

### Traffic to stop:

All, in Infected Area.

Stock trucks, in Protected Area, and attempting to leave  
Protected Area.

### Police Deployment:

#### A. Initial:

- (a) Region 20 Coordinator (VIC DISPLAN) plus local officer-in-charge to R.E.C. - co-locate with Movement and Security Team = Liaison with other sections (2);
- (b) Guards on infected properties (3);
- (c) Localised road blocks (8);
- (d) 1 mobile patrol in area (2); and
- (e) 1 mobile patrol available at REC (2).

#### B. On Immediate Standby:

- (a) Independent Patrol Group - Melbourne; and
- (b) Local personnel, onto relief system for initial manning.

Police Deployment: (cont)

## C. When full Spread is Apparent:

(Many small farms/unformed roads)

- (a) Helicopter to area;
- (b) Communications Caravan to R.E.C.;
- (c) Close small roads and divert traffic through  
manned road-blocks; and
- (d) Independent Patrol Group to assist slaughter teams

Question 2: Equipment, Materials and Manpower

- Requirements:
- i men - musterers, destruction teams
  - ii transport - motor bikes, bus/cars
  - iii firearms/ammunition/captive bolt pistols/  
knives
  - iv mobile yards

Quantities: depends on,

- i number of animals;
- ii number & location of properties;
- iii terrain (mustering); and
- iv facilities.

[manpower: 5 man days/ 1000 beasts or equivalent destroyed]

Source: Police, slaughtermen, shooting clubs, armed forces.

Disposal: decision - burn or bury?A. Stock: 1. Bury:

- Requirements:
- i earth moving equipment;
  - ii carcass transport; and
  - iii slashing hooks

Quantities: depends on numbers of animals to be destroyed.

Source: local government agencies, main roads  
organisations, other government departments,  
local contractors, armed forces.

## Question 2 (contd)

## 2. Burn: approval from local fire authority

Requirements: i heavy transport;  
 ii cranes;  
 iii fire materials; and  
 iv manpower.

Quantities: number of animals to be destroyed

[manpower: 4 + 2 per 100 beasts or equivalent]

Source: as above and railways, fuel depots.

## B. Contaminated Materials:

Requirements: Chemicals: eg. soda ash,  
 citric acid,  
 formalin, and  
 formalik.

- depends on type of material

Quantities: depends on amount of material and  
 recommended rates.

Source: Government Stores,  
 Local retail outlets,  
 Manufacturers.

Disinfection:

## Infected Properties

- entrance,
- buildings (dairies, piggeries, sheds),
- contaminated land.

Requirements: i chemicals,  
 ii tent/changing facilities,  
 iii washing facilities,  
 iv pumps/spray units/boom sprays,  
 v shovels, brushes, brooms, scrapers, and  
 vi manpower/transport.

Quantities: depends on size of property and degree  
 of contamination.

Source: Government Stores, local retail outlets,  
 SES, Armed Forces.

[Disinfection Teams - Armed Forces?]



### Question 3: Communications

Full communication support will be necessary (see diagram)

- (a) Facsimile (FX) Point to Point REC/EDOC.
- (b) Telex (TX) - REC to provide information copies of all reports to interested organisations and other State Agencies (NSW, SA)
- (c) Radio Three tactical nets:
  - (1) Police - Traffic control/decontamination net
  - (2) Police - mobile police net
  - (3) SES - Vet inspection control net
- (d) Computer One line REC/EDOC
- (e) Phones
  - (1) 20 line switchboard /external
  - (2) 20 line internal live system
- (f) Pagers not necessary

### Question 4: Operational Support - Welfare

#### Definition

The provision of those services required to meet the immediate needs of the affected population and those people engaged in an exotic animal disease counter-disaster operation.

#### Assumptions

- a. Support organisations retain own administrative and management control structures.
- b. Farmers stay on own property, however, children may be relocated with friends or relatives.

## Question 4 (contd)

Support RequiredOperators

Feeding  
 Sanitation  
 First Aid  
 Accommodation  
 Special clothing  
 Laundry  
 Emergency power  
 lighting  
 transport

Farmers

Feeding  
 Counselling  
 Social Security  
 Medical  
 POL  
 Postage  
 Transport

Arrangements

- a. State Emergency Service responsible for coordination of support and obtaining financial approval for same.
- b. SES to determine source and make arrangements for obtaining support both internal and external.
- c. Responsibility for particular services delegated to public and private sector organisations and departments as appropriate.
- d. Take account of existing welfare support plans.
- e. Establish Welfare Cell in the REC linked to cell in EDOC.
- f. Establish Welfare Centre at location to be determined

Question 5: State Differences

Size: W.A. is the extreme being about 1/3 of the Australian land mass and therefore will be used as an example.

Physical characteristics include climate. This ranges from tropical in the north to mediteranean in the south. The in between includes plains and deserts. The state has a very long coastline, mostly uninhabited.

There are no great permanent waterways, the main water flow is seasonal.

Population is very sparce for an area of this size, with most of the people crowded into the Perth metropolitan area and parts of the coastal fringe. Most of the inland population is confined it the gold fields and the agricultural area in the south-west. ie. Kalbarri to Esperance.

### Question 5 (contd)

Land use. Farming includes dairy, fat stock, sheep, pigs poultry, grain. Much of the far south-west is natural forest where hardwood is harvested, and is very similar to national parks. Pine forests can be treated more like farm land.

Recreation areas include national parks, some of which are very large with little resources to manage them, generally low value land. Parks and gardens are more closely managed and present very few problems.

Dams such as the Ord and to a lesser degree the dams of the south west, could present a problem.

Mining is of little consequence in such an exercise.

### Question 6: Training and Preparations

It is absolutely essential to establish all procedures involving supporting agencies prior to an outbreak.

#### SUPPORTING AGENCIES - VICTORIA

- a) Police;
- b) SES;
- c) Local Govt;
- d) Telecom;
- e) PWD;
- f) Bureau of Meteorology;
- g) Public health;
- h) Land & Surveys;
- i) Fisheries & Wildlife;
- j) Fire Authorities;
- k) Forests;
- l) Commonwealth support - NDO; and
- m) Interstate support.

All agencies are to be signatories to ADEP and to have nominated contact officer and deputy.

Police and SES are to be included in all comprehensive field training exercises and table top or procedural exercises, as appropriate.

Other agencies to be included in training exercises, as appropriate.

All agencies are to prepare supporting plans which are to be tested separately and in joint exercises, as appropriate.



Question 5 (cont'd)

## Question 6. (cont'd)

Procedures to be included in ADEP

- (a) Method of activating/de-activating each agency;
- (b) Roles of each agency;
- (c) Chain of command;
- (d) Briefing procedure; and
- (e) Mechanism for payment for services.

## SUPPORTING AGENCIES - VICTORIA

- a) Police;
- b) SES;
- c) Local Govt;
- d) Telecom;
- e) Fire;
- f) Bureau of Meteorology;
- g) Public Health;
- h) Land & Survey;
- i) Fisheries & Wildlife;
- j) Fire Authorities;
- k) Forestry;
- l) Commonwealth support - SDO, and
- m) Interstate support.

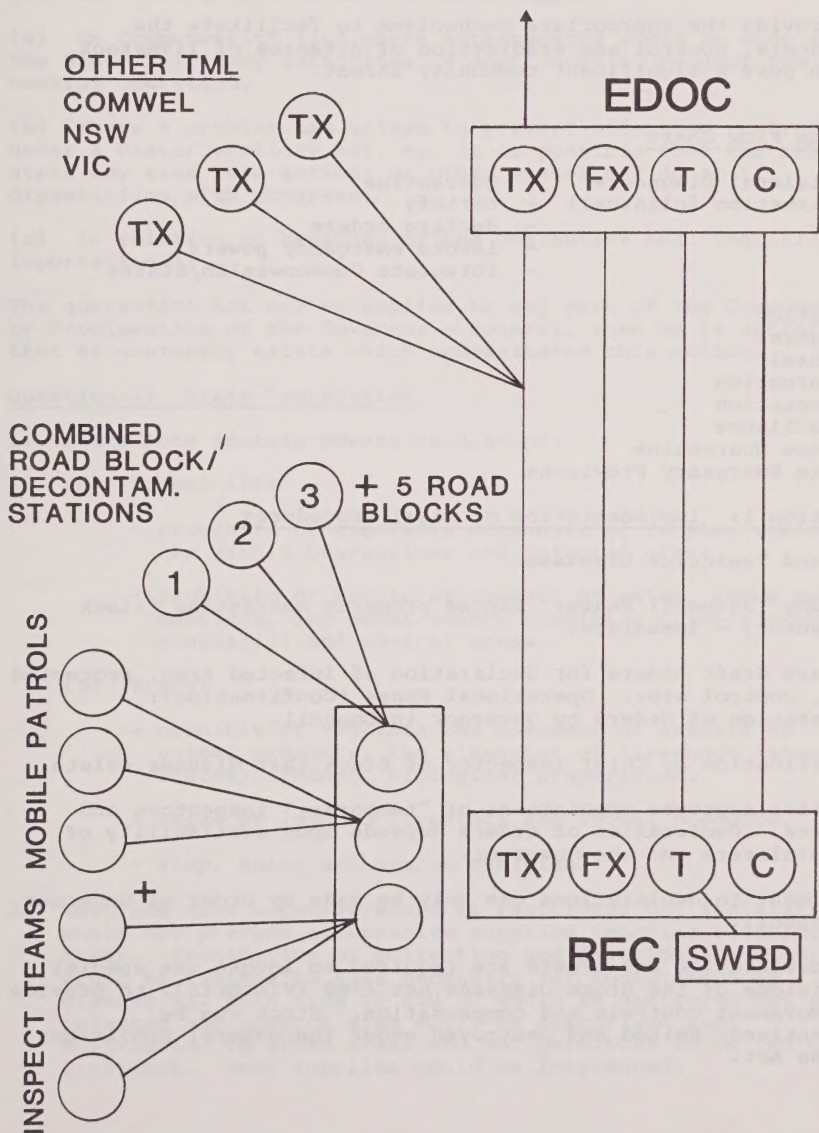
All agencies are to be identified to ADEP and to have nominated contact officers and deputy.

Police and SES are to be included in all emergency field training exercises and crisis or simulated exercises, as appropriate.

Other agencies to be included in training exercises, as appropriate.

All agencies are to provide support, as appropriate, as requested and in joint exercises, as appropriate.

All are participating and will have a role in training exercises, as appropriate.

COMMUNICATIONS

SYNDICATE 3LEGAL AND FINANCIAL ASPECTGeneral Objectives - Legal

To provide the appropriate mechanisms to facilitate the diagnosis, control and eradication of diseases of livestock which pose a significant community threat.

Action Flow Chart

|                         |                                 |
|-------------------------|---------------------------------|
| Provisional Diagnosis   | - Quarantine                    |
| Confirmation (clinical) | - certify                       |
|                         | - declare orders                |
|                         | - invoke emergency powers       |
|                         | - integrate Commonwealth/States |

Valuation

Slaughter

Disposal

Disinfection

Compensation

Surveillance

Release Quarantine

Revoke Emergency Provisions

Question 1: Implementation of legal Procedures

FMD and Vesicular Diseases.

Standby (Suspect) Phase: Impose property quarantine (stock inspector) - immediate.

Prepare draft orders for declaration of infected area, protected area, control area. Operational Phase (Confirmation): Declaration of Orders by Governor in Council.

Certification by Chief Inspector of Stock that disease exists.

Minister approves appointment of "temporary" inspectors and valuers. Declaration of orders depends upon availability of two Ministers and the Governor.

Amendment to declarations can only be made by Order of Governor in Council.

The declaration and orders are required to invoke the special provisions of the Stock Diseases Act 1968 (Victoria), to provide for movement controls and compensation. Stock can be quarantined, seized and destroyed under the general provisions of the Act.



### Question 2: Use of Commonwealth Quarantine Act

It would be most appropriate to control exotic disease outbreaks in each state or territory under State/Territory stock disease acts.

The Commonwealth Quarantine Act would apply:

- (a) On Commonwealth land where arrangements would be made with the State/Territory authorities in most cases to conduct the control operation.
- (b) Where a problem had arisen to prevent effective control under a State/Territory Act, eg. it is possible that the relevant state may seek this action; or other states may do so if dissatisfied with progress.
- (c) In relation to breaches of the Quarantine Act. (eg. illegal importation.)

The quarantine Act may be applied to any part of the Commonwealth by Proclamation of the Governor - General, when he is satisfied that an emergency exists which necessitates this action.

### Question 3: State Legislation

#### 1. State Acts contain powers to disrupt:

##### (a) Normal life:

- prohibits or regulates movements of people, vehicles etc within Quarantines and infected areas,
- prohibits or regulates conduct of sales, shows race meetings, and other events involving animals within standstill and control areas.

##### (b) Trade:

- prohibit or regulate the movement of animals or animal products, the slaughter of livestock (some States), fodder, biological preparation.
- seize or impound livestock and animal products.
- stop, enter and search vehicles.

#### 2. Meat and milk supplies would be restricted but legislation would not prevent alternative supplies reaching restricted areas. Prohibition of collection and distribution of milk would be limited to that necessary for containment of disease eg. milk from IP and DC would be destroyed but from infected and control area would be pastured and distributed to urban areas and not permitted to be fed to livestock. Meat supplies could be introduced.

Question 3 (Cont)

3. Most penalties for offences are totally inadequate. Inspectors have powers to call on police and to use appropriate force.

Question 4: Compensation

Where State legislation has been invoked because it was considered that disease was present or where action had to be taken, then compensation can generally be paid for animals which have died of disease; achieved by dating operation of legislation.

In some States compensation is restricted to those animals which, at the time of deaths were in premises or on land under quarantine.

There is a need to lift this constraint, to permit payment where deaths occurred prior to invoking quarantine. Where animals are slaughtered for diagnostic purposes and no disease found, it is reasonable to consider compensation. This may be by ex gratia payment or by adaptation of existing state compensation legislation. Accidental damage, in most cases would be made good and be an operational expenditure.

Question 5: Financial Arrangements

Financial arrangements permit payment for accommodation and catering. Salaries and wages of officers and employees of the state, who are or would be employed, irrespective of any outbreak of exotic disease, are not included. Contractors would be expected to make their own workers compensation and like arrangements.

There is a need to confirm workers compensation arrangements where staff are moved from State to State.

Question 6: Modification of Boundaries

- a) Most states need to obtain a Ministerial approval and Gazettal or the same, by the Governor in Council to vary the boundary of the infected or declared area.  
Only two states (QLD and WA) have given this authority to the Chief Inspector of Stock.
- b) It was generally agreed that having to go to the Minister or Governor in Council was too cumbersome and could cause delays during a period when often time is important. While all states had a stand still provision actionable by the Stock Inspector, it did not invoke all the powers of the Act, as the gazettal would, and this has some limitations.

Question 6b (cont.)

However, the Minister will need to be kept fully aware of any extensions or modifications to existing boundaries, as the ramifications are wider and greater for the Government when the full powers of the Act are operating.

- c) In this regard most State representatives felt a need for revision of their Acts to make them more flexible and responsive to a situation which is always fairly dynamic.

Question 7: Conflicting Legislation

- (a) Protected species. Only Queensland has over-riding legislation, but all states should. In the interim, annual permits to destroy protected wildlife should be obtained for relevant staff.
- (b) Environment Protection. Administrative arrangements exist in several States for EPA staff to assist at disposal and disinfection sites. It is unclear if an EPA Inspector can be over-ridden, or if the need for licences to discharge waste has been overcome legally.
- (c) Access to Commonwealth property. As State Acts have no force, Inspectors do not have automatic right of entry. The Commonwealth Quarantine Act would be invoked.

In most cases the Commonwealth would welcome State authorities to deal with an outbreak affecting Commonwealth property. However the question of prohibited or restricted (sensitive) areas needs clarification, particularly to property managed jointly with a foreign power.

- (d) Firearms. Victoria's Firearms Act exempts Stock Inspectors.

Question 8: Training and Preparations

What would be the responsibilities of the states and the Commonwealth in rehabilitation and reconstruction?

Hopefully one would expect carry-on loans being made available.



Question 8 Cont.

Currently reconstruction loans are/have been made available to approved viable enterprises:

- to declared drought affected properties;
- TB/Brucellosis pastoral Properties;
- Properties ravaged by bushfires as declared under N.D.A.;
- Flood effected properties, as declared by State to be eligible for carry-on loans.

Recommendation: Stock Industry be well advised to discuss situation through their local and federal bodies and explore possible solutions.

In addition to receiving compensation for stock slaughtered, the stock producer would require assistance to:-

restock;  
obtain fodder reserves;  
and general living expenses etc.

Hence it is considered that both the state and Commonwealth Government have an obligation to get the industry back on its feet as quickly as possible.

Summary

- (a) Need to move toward uniformity of principles and mechanisms.
- (b) Flexibility - Preparation of Draft Orders.
- (c) Powers vs Civil Liberties.
- (d) Compensation to promote reporting and diagnosis.
- (e) Employment provisions - Secondment, temporary.
  - Contractual - Workers Compensation;
    - Liability;
    - Negligence;
    - Civil damages.
- (f) Delegation of Legal Responsibilities.
- (g) Define Commonwealth/States functions/powers.
- (h) Relief and rehabilitation.
- (i) Procedural guidelines:
  - conduct,
  - restraining orders and injunctions.

SYNDICATE 4

EMERGENCY CENTRE MANAGEMENT

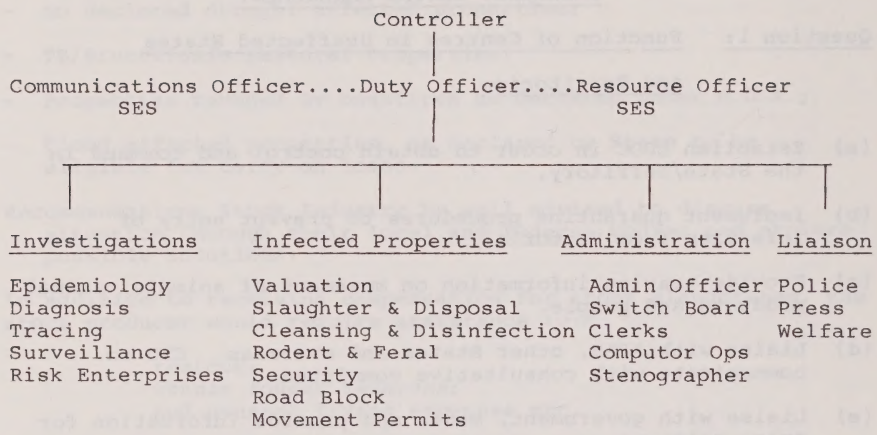
Question 1: Function of Centres in Unaffected States  
and Territories

- (a) Establish EDOC in order to obtain control and command in the State/Territory.
- (b) Implement quarantine procedures to prevent entry of infection from Victoria.
- (c) Provide tracing information on movement of animals, animal products and people.
- (d) Liaise with ABAH, other States and overseas. CVO to communicate with consultative committee.
- (e) Liaise with government, media and provide information for press releases.
- (f) Prepare staffing lists, available resource lists and necessary administrative support.
- (g) Ensure requirements for special legal powers are prepared or activated.
- (h) Decide priorities for action and the extent to which staff and resources are mobilised.
- (I) Brief and deploy staff and brief special enterprises (dairy factories, meat works etc.) and farmers' organisations.
- (j) Account for all expenditure involved in the operation.

Question 2: Manpower Requirements

To effectively estimate the manpower requirements to run a REC, there will be a need to clearly define and design a Task Diagram setting out staffing positions needed within the REC.

The following was agreed as a reasonable representation of positions needed:



In designating these positions, there will need to be consideration of numerous other details, in order to decide if some of the positions can be amalgamated or need to be expanded.

Therefore to effectively use this chart, the type of further information to be considered will be :-

- (a) species of animal involved;
- (b) disease involved in outbreak;
- (c) size of outbreak;
- (d) age of lesions;
- (e) types of livestock enterprises in district;
- (f) density of livestock enterprise;
- (g) Human population density;
- (h) meteorological information;
- (i) Stock sale;
- (j) abattoirs and dairy factories;
- (k) hours of operations;
- (l) relief crew requirements;
- (m) environment and topography; and
- (n) staff projections.

Most of this information should be available early in the situation, but continuous evaluation will be needed as the exercise progresses.



Question 3: Preparations to facilitate rapid setting up of an  
Emergency Centre

- (a) Assess current and potential physical demands created by disease outbreak (location, activity etc.).
- (b) Determine manpower involvement (field staff, admin support, outside organisations).
- (c) Determine accommodation needs and arrange suitable building (Factors are building size, location, communication, security access, available services, cleaning, acoustics). Support from other organisations to be considered (SES, electoral office, works department etc).
- (d) Transport arrangements (means of travel, parking, access).
- (e) Communications (facsimile, switchboard, radio, telephone).
- (f) Office systems (filing, recording, ADP,); avoid loose paper; office equipment (white boards, photocopying); office requisites (forms, stationary supplies).
- (g) Field staff needs (Stores and equipment, maps, name tags, signs, organisation identification) catering facilities (cooking, refrigeration, utensils. Food supplies through Red Cross, Salvation Army).
- (h) Training, source and availability of equipment, accounting accountability; alert other organisations.
- (i) Obtain assistance in setting up, (Police, SES, Telecom Works Dept, local authority, Red Cross, Salvation Army, Electoral officer (Partitions)).
- (j) Organisations to be notified (health, conservation, wild-life, lands, water resources, fire, community welfare, dairy authorities, valuation, meat industry, artificial, breeding).

Question 4: Arrival of OIC(a) Arrival of OIC at REC

- (i) Arrive when centre set up; and
- (ii) Deputy in town - based temporarily at Shire Office or Police Station for example.

(b) Interim

OIC - Stay at regional office to communicate with EDOC, IP and deputy in town near IP.

Question 5: CVO's Delegation to the OIC(a) Infected and protected areas

Still prerogative of CVO, but taking into consideration recommendations of OIC who would have considered such things as, geography, species of animal involved and weather. Police consultation essential to make best use of roadblocks to secure the area.

(b) Dangerous Contact Properties

Prerogative of CVO,

Some confusion between contacts and dangerous contacts - clearer definition required.

Question 6: Direction of Incoming Telephone Messages

- (a) Establish a communications centre and appoint a duty communications officer/supervisor.
- (b) Install a switchboard with adequate exchange lines and extensions to key sections within the headquarters.
- (c) Establish a message control system and flow procedure within the headquarters.
- (d) An internal telephone directory should be prepared and promulgated internally, to the EDOC and supporting agencies.

### Question 6 (cont)

- (e) Telephone message forms/pads and logs should be used.
- (f) A system of message precedence and classification should be adopted.
- (g) Telephone answering and switchboard operating procedures should be contained in training and briefing.  
Card instruction at each instrument could be considered.
- (h) A follow-up procedure for outstanding messages should be instituted.
- (i) A separate area and telephone should be available for the media.
- (j) Silent numbers should be available.

### Questions 7: Veterinary Manpower

- (1) Vets in R.E.C. - Keep to a minimum

|           |                                    |
|-----------|------------------------------------|
|           | ( 1- Controller/O.I.C              |
| Suggested | ( 1- Deputy Contoller              |
| Minimum)  | <( 2- Investigations, Epidemiology |
| Maximum)  | ( 1 Media                          |
|           | <u>5</u>                           |

- Allocate tasks to other professionals or trained staff.
- Need to keep Govt. Vets in other regions for tracing and possible outbreaks of disease.

- (2) Sources of Vets

- (i) Interstate;
- (ii) Some intrastate (eg Labs & distant regions);
- (iii) Private vets - Particularly Infected. Area Others  
doing normal duties;
- (iv) Retired vets;
- (v) Overseas; and
- (vi) Final year vet students.



Question 8: SecurityGeneral Establish Overall Security

- (a) Private security firm/designated officers.
- (b) All personnel easily identifiable  
(eg. ID Cards) etc.
- (c) No documentation to leave REC without authority.
- (d) Briefing area separate to main area.

Information

- (a) Authority for local release from CVO.
- (b) No information to be released without permission of OIC.
- (c) All information to be confidential.
- (d) Hold regular media briefings.

Stores

- (a) Appoint stores control officer.
- (b) All issues recorded.
- (c) All issues on authority of OIC.
- (d) Separate Areas for issue and return of stores.

Disease Control

- (a) Decontamination of personnel and equipment.
- (b) Progression of team status  
i.e. - Tracing -> surveillance -> I.P.
- (c) Security at IP's.
- (d) Avoid contamination between teams.
- (e) Document contamination.

Question 9: Dangers of Duplication - How to Overcome it?

Danger of Duplication of Responsibilities between EDOC and REC in the following areas:-

- (a) decision - making;
- (b) media;
- (c) epidemiology;
- (d) manpower; and
- (e) resources.

Avoid duplication by:

- (a) defining role of EDOC and REC, and document EDOC overall policy role, to manage outside of REC's gazetted areas;
- (b) defining roles of senior officers in EDOC and REC and document;

Question 9 (cont)

- (c) Maintaining line authority in terms of communication between both centres;
- (d) CVO to clarify his information needs, effective information system to advise EDOC; and
- (e) Defining whose responsibility it is to task supporting agencies.

Question 10: Training for Senior REC StaffType of Training

- (a) Operations Centre Procedures Training.
- (b) Counter-Disaster Management Training.

Methods

- (a) Tutorial exercises - problem solving and testing of plans.
- (b) Command Post exercises - Training for real events in real time (telephone battles).

Note: Only exercise two elements at any one time.

- (c) Field exercises (i) Tactical exercises without troops;  
(ii) use of field staff.
- (d) Observation of real overseas outbreaks, particularly the management and organisational aspects.
- (e) Observation or participation in interstate exercises; more conducive to compatibility of planning.
- (f) Training the trainers (methods of instruction techniques).

Question 11: Emergency Centre ManagementO.I.C. Roles (Policy)

- (i) supervision & control of infected area;
- (ii) liaison with Regional Disaster Controller;
- (iii) liaison with E.D.O.C;
- (iv) policy on which information is referred to him;
- (v) media releases;
- (vi) situation reports;
- (vii) legal requirements;
- (viii) briefings on status, Strategy & Policy;
- (ix) staff morale; and
- (x) brief relieving OIC.

Deputy Roles (Operations)

- (i) establish R.E.C.;
- (ii) issue OPs instructions;
- (iii) maintain log;
- (iv) maintain displays;
- (v) duty rosters;
- (vi) liaise with OIC & resources officers
- (vii) supervise admin;
- (viii) Approve expenditure of funds; and
- (ix) brief relieving deputy.



SYNDICATE 5

INFORMATION MANAGEMENT

Question 1

Information Required by Veterinary Investigations Section

| <u>Information</u>            | <u>OIC</u> | <u>Epid</u> | <u>Tracing</u> | <u>Surv/<br/>Insp</u> | <u>Diag-<br/>nosis</u> | <u>Risk<br/>Enter-<br/>prises</u> |
|-------------------------------|------------|-------------|----------------|-----------------------|------------------------|-----------------------------------|
| Visit Details                 | X          | X           |                | X                     | X                      |                                   |
| Owner Name, Address           | X          | X           | X              | X                     | X                      | X                                 |
| Property Location<br>details  | X          | X           | X              | X                     | X                      | X                                 |
| Quarantine details            | X          |             | X              | X                     |                        | X                                 |
| Stock numbers                 | X          | X           |                | X                     | X                      |                                   |
| Stock examined                | X          | X           |                | X                     | X                      |                                   |
| Health of Stock<br>(status)   | X          | X           | X              | X                     | X                      |                                   |
| History & clinical<br>signs   | X          | X           |                |                       | X                      |                                   |
| Neighbours, employee<br>Stock | X          | X           | X              | X                     |                        |                                   |
| Other Property                | X          | X           | X              | X                     | -                      | -                                 |
| Stock movements               | X          | X           | X              | -                     | -                      | X                                 |
| Visits to/from<br>property    | X          | X           | X              |                       |                        |                                   |
| Milk Collection               |            | X           | X              |                       |                        | X                                 |
| Swill Feeding                 |            | X           | X              |                       |                        |                                   |
| Property Security             |            | X           |                |                       |                        |                                   |
| Other tracings                |            | X           | X              |                       |                        |                                   |
| Feral animals/rodents         |            | X           |                |                       |                        |                                   |
| Other epidemiology            |            | X           |                |                       |                        |                                   |

Question 1 (Cont)Information Required by Infected Premises Section

| <u>Information</u>                 | <u>OIC</u> | <u>Val-</u><br><u>uation</u> | <u>Slaughter</u> | <u>Disp</u> | <u>C&amp;D</u> | <u>Security</u> | <u>Ferals</u> |
|------------------------------------|------------|------------------------------|------------------|-------------|----------------|-----------------|---------------|
| <u>Visit Details</u>               |            |                              |                  |             |                |                 |               |
| Owner Name,<br>Address             | X          | X                            | X                | X           | X              | X               | X             |
| Property Location<br>details       | X          | X                            | X                | X           | X              | X               | X             |
| Quarantine details                 | X          | X                            | X                | X           | X              | X               | X             |
| Stock numbers                      | X          | X                            | X                | X           | -              | -               | -             |
| Stock Examined                     | -          | -                            | -                |             |                |                 |               |
| Health of Stock<br>(status)        | X          | X                            | -                |             |                |                 |               |
| History & clinical<br>signs        | X          | -                            | -                |             |                |                 |               |
| Neighbours                         | -          | -                            | -                |             |                |                 |               |
| Stock movements                    | -          | -                            | -                |             |                |                 |               |
| Visits to/from<br>farm             | -          | -                            | -                |             |                |                 |               |
| Milk Collection                    | -          | -                            | -                |             |                |                 |               |
| Swill Feeding                      | -          | -                            | -                |             |                |                 |               |
| Property Security<br>(fences etc.) | X          | -                            | X                |             |                | X               |               |
| Valuation<br>considerations        | X          | X                            | -                |             |                |                 |               |
| Slaughter cons.                    | X          | -                            | X                |             |                |                 |               |
| Disposal cons.                     | X          | -                            | -                | X           |                |                 |               |
| Cleaning &<br>Disinfection cons.   | X          | -                            | -                |             | X              |                 |               |
| Slaughter Authority                | X          | -                            | X                |             |                |                 |               |
| Other tracings                     | -          | -                            | -                |             |                |                 |               |
| Feral animals                      | X          | -                            | -                |             |                |                 | X             |

### Question 1 (cont)

Additional information needed on field reports:

- a. circulation list; and
- b. priority for further action.

### Question 2 Information presented on REC and EDOC Bulletin Boards

Everyone working from a REC or EDOC should have availability to them:

- (a) orientation information relevant to centre; and
- (b) overview information.

Some boards will also serve public information roles for non - participating persons within the respective centre.

A need for the following boards is seen:

#### (a) Organisation Charts

A plan of the centre showing "who and where" should be positioned in operation, visitors and team assembly area;

(EDOC will have lists of the above plus telephone Nos.)

#### (b) Situation Board

Should be at RECs and EDOC and give updated information such as:

- i No of infected properties;
- ii No of DC properties;
- iii No of properties visited; and
- iv No of stock destroyed etc.

#### (c) Teams Board:

Not to be confused with operational manpower board. Would be placed in the team assembly area. Showing team identification, team membership, radio call sign, car registration and whether on or off duty: Also would be a general bulletin board for "in house arrangements" OIC instructions. EDOC would use a simpler version of this board.



Question 2 (Cont)(d) Map Board

Again not to be confused with "operational map board":  
Placed in team assembly area to assist people to  
familiarize themselves to the area would show;

- i Infected Premises;
- ii DCP
- iii Disinfection centres; and
- iv closed roads etc:

Use only for REC and not EDOC:

(e) Published Bulletins

The REC in particular may need to produce at intervals  
staff bulletins, giving participating staff update  
instructions and information. Should be given to all  
staff as well as placing it on the teams board.

Question 3 Automatic Data Processing

Current situation - Anemis  
- various state developments'

Anemis is a series of forms which can be directly transposed to  
a form on an ADP program. The two should be similar enough  
to enable transposition to be easily achieved and verified.  
Data as it is received would be screened by OIC, REC or his  
nominee:

Urgent action would be immediately distributed and recorded  
later; other information immediately recorded.

Reports can be reproduced, sorted and listed according to need

- eg. i for OIC, REC  
ii for Epidemiology  
iii for Veterinary Investigations - tracing,  
surveillance,  
risk enterprises, and  
sentinel restocking.

- iv for Infected properties Operations - valuation,  
- slaughter,  
- disposal, and  
- cleaning and  
- disinfection.

### Question 3 (cont)

This would include both historical and predictive data (ie job lists etc) Modern connection between EDOC and REC would mean effortless information transfer, and reports, statistics etc, could be done at EDOC, by staff detached from REC.

The system should be operable manually or by battery in event of power failure, at least for data storage and for IP operations data.

Further possible uses of ADP include:

- (a) Infected property accounting - ie keeping track of expenditure of compensation funds - probably an administrative area.
- (b) Vehicles, stores, accounting - again administrative and could probably be handled on existing facilities.
- (c) Personnel data - registration, overtime, time off.
- (d) Modelling -with meteorological information if necessary.
- (e) Data Analysis eg rescheduling of visits as new IP's found.
- (f) In conjunction with already known property data, forms could be issued with already known information, infected areas automatically defined, surveillance efficiently organised.
- (g) Identification of risk enterprises.

Automated data processing should be developed at a national level, with facilities for each states hardware to be connected. This would contribute greatly in exchange of information between states and would be valuable in an incident involving more than one state.

### Question 4 Information Management

Consider the question - "Does the man in the Field and his support staff at headquarters have properly designed documentation on which vital information can be recorded, disseminated and acted upon?"

The best test as to the quality of documentation is obviously be EXERCISE, but the same should be constantly monitored. What was good for an exercise or real operation 2-3 years ago is not necessarily good for a test tomorrow.

Question 4 (cont)

Forms and other documents should be designed in order that:-

- (a) They can be completed with a minimum of effort.
- (b) They are set out to contain only information relevant to the matter under enquiry.
- (c) They are clean and easily comprehended by the USER.
- (d) The RECIPIENT can readily comprehend information set out in the form.
- (e) They preclude AMBIGUITY.
- (f) The information contained in the documentation can be computerised without further processing.

Now to the question of what categories of staff should be used in the important facet of recording frontline information in the field and evaluating and acting upon that information in a Regional Emergency center or in an Exotic Animal Disease Operations Centre.

An Exotic Animal Disease Outbreak can be equated to a long protracted Police Operation, such as an Aircraft Crash involving the loss of many lives.

Just as does a farm or farms suspected of carrying (or having carried) diseased stock have to be 'sealed off', so does the scene of an aircraft crash with inner and outer perimeters. As there is a need to have skilled veterinary surgeons to diagnose and treat the disease, so is the need for medical practitioners and paramedics to treat the injured and preserve life, as well as qualified engineers from the Dept. of aviation to sift through the tangled mass and find the reason for the crash.

Many of the roles in any disaster situation are interchangeable. For example, police could assist in a medical situation, ambulancemen in a fire situation. A citizen could assist in either or both categories, however, the role of the expert ie. a medical practitioner at the site of a crash, a veterinary surgeon in the field or an engineer at the crash site, cannot and should not be changed.



Question 4 (cont)

## TRAINING

| FUNCTION        | CATEGORY                                                     | LEVEL OF TRAINING                                           | PRIORITY |
|-----------------|--------------------------------------------------------------|-------------------------------------------------------------|----------|
| Collectors      | Vets - Dept. & Practitioners<br>Stock Inspectors             | Awareness of ANEMIS - Structure and Systems                 | High     |
| Decision Makers | Section Leaders<br>REC/EDOC<br>(Senior experienced officers) | - Full understanding of systems<br>- Specific Role Training | Highest  |
| Support Staff   | - ADP Operators<br>- Admin Support staff                     | - Basic awareness<br>- Experience with software             | High     |

The above table gives a short summary of the categories of staff that should be trained in information management. Without nominating set-times for training or exercise, it is felt that the system should be an ongoing process with collectors (that is, veterinary surgeons both departmental and private practitioners/stock inspectors). decision makers (section leaders in the REC and EDOC) and support staff (ADP operators and administrative support staff), being regularly acquainted with documentation or procedures that will effect them in the successful discharging of allocated duties. It is important to have collectors/decision makers/support staff confident in their own ability to fulfil their function. It is equally important to test the system by searching and honest debriefs, after exercises or a real operation, mounted to cater for a suspect case of an Exotic Animal Disease Outbreak.

### Question 5 Information for Overseas Trading Partners

It is necessary to define the target audience and the reason for requiring the information before considering what essential information not be supplied.

It was decided that there were these major organisations requiring this information:

- a. OIE;
- b. trade posts; and
- c. trading countries without posts.

The main reasons for supplying the information are:

- a. ensure tht only CORRECT information is distributed;
- b. allay unnecessary fears;
- c. keep the situation in perspective; and
- d. evaluate or reduce possible adverse effects upon trade.

It was considered that the following information should be supplied:

- a. Disease situation report -

This is to include details of when & where it occurred, how many foci and animals are involved & details of animals slaughtered.

- b. Precautions taken -

Details of quarantine restrictions imposed, assurance that products which may be contaminated do not reach export markets.

Assurance that products from non-affected areas are safe and no animal health disease risks in the reporting country.

- c. Notification of consignment of animals & animal products en route to the reporting country. CVO's to advise for animals. DPI to advise for animal products.

It is absolutely essential that this information be distributed by the fastest possible means eg Telex. The repercussions on international trade are so great that only a very senior officer of BAH with some knowledge of international communications should be responsible for ensuring that all messages are sent 'top priority'.

The BAH is responsible for seeing that the messages are sent. The OIE notification goes from CVO. Trade Posts are notified through MFA. Trading countries with no Trade Posts: If no CVO contact is known then the necessary 'contact person' can be obtained from the major exporter.

## Question 6 Control of information flow:

### (a) Between REC and EDOC

Formal Reports i by pre-arranged (and publicised) schedule of hard copy (telex or facsimile) from REC to EDOC; and

ii responsibility of OIC (REC) only or deputy.

Formal Requests/Messages from EDOC - routinely through OIC or deputy.

Informal Information - Objective is to minimise informal contact but the need is recognised for occasional direct transfer of technical information between individuals or units in REC and EDOC, with common technical responsibilities. This transfer should not involve policy or transgress areas of technical expertise.

NOTE - Training of EDOC and REC staff should include guidelines on information flow, to ensure adequate control in a disease emergency.

### (b) Between States

Routine report/message/request normally from CVO to CVO (only) except:

- i Urgent traceback - may involve OIC/REC to local veterinary manager (usually RVO) direct but in that event, EDOC (CVO) must be informed immediately to ensure interstate CVO notification.
- ii In case of shared or concurrent (border), REC resources/ facilities.

It was noted that tracebacks outside the protected area should be referred through EDOC to neighbouring district staff.

### (c) Between States and Commonwealth

Routine information flow from EDOC to ABAH. The Bureau should act as liaison unit to other Federal Departments or Agencies.

Contact can (and should) occur between EDOC and Heads of regional (State) branches of Commonwealth Depts. (eg, DPI, Health). Such contact must be on operational matters only - not policy.



(d) To the Public

Current difficulties were recognised with varying Ministerial or CVO restriction on press releases. It was agreed that:

- i Press/public statements should be issued at two levels:
  - A EDOC - for policy issues, state/interstate progress; and
  - B REC - to indicate local situation and (edited) progress report of activity in the protected area.
- ii Media releases should be prescheduled for release at regular intervals from both centres to reduce the demand for ad-hoc news.
- iii Media personnel should be kept informed. To fail to do so invites irresponsible and inaccurate journalism. To involve them will have important spinoffs such as reports of disease/movements, tracing information and effective publicity of movement restrictions.
- iv Departmental journalists could be used to produce "photopackages" and prepared stories for release to public media.

It was agreed that media staff would accept this approach as an alternative to total prohibition of entry to (for example) an IP as long as they are well briefed on the reasons beforehand.

SYNDICATE 6

PUBLIC RELATIONS ASPECTS

Five years' ago, Dr John Digby (Assistant Director, Australian Bureau of Animal Health) told the Exotic Animal Disease Emergency Study that perhaps one of the most potentially dangerous weaknesses in the national strategy for countering a major exotic disease emergency, lay with public relations preparations. In 1985, sadly, the same comment can validly be made. Dr Digby went further and said it was essential during an eradication campaign to release to the media, as much information on the action being taken as possible, in order to maintain public confidence and co-operation. At the same time he expected those seeking information to have a degree of self-discipline.

Dr Digby said: "It is the media's job to get news to the public and unless they are treated as professionals, which they are, they will be critical."

Despite varying attitudes to the media within the public relations syndicate, there was no real dissent from Dr Digby's remarks.

Looking at the formal questions set before us in the major exercise, we decided that the second part of Question 2 should be the first thing considered. That question is: "What information should be prepared in kit form before an outbreak occurs?" We believe general information kits on foot and mouth disease (FMD) should be immediately prepared on a national basis dealing with the disease, the need for fast action, the reasons for humane destruction of animals, the need for quarantine and buffer zones, the likely economic effects, compensation for farmers and the role of the media in an outbreak. The kits should contain relevant colour and black-and-white photos and even a video should be made available.

The kits should be released to the media as soon as they have been prepared, to give journalists authoritative background material they can keep in their libraries. When an outbreak occurs, the kits - updated and containing specific information relating to the actual outbreak - should be made available to media at the first media conference announcing the outbreak.

Relevant sections of the kit should be sent as information sheets to producers, stock agents, farmer organisations, sale-yard people, livestock carriers and show societies.

The information would include the need for reporting suspicious circumstances, the symptoms, contacts to report the disease, advice for people living in the area of infection, compensation details and the need for co-operation with authorities.

The discussion on what essential messages had to be conveyed internationally, locally and to the public when FMD was first suspected, led to a vigorous debate on when the media should be told anything. Several members of the syndicate assumed the media would not be aware of a suspected outbreak because of the limited number of people involved at that stage. But others in the group with more experience in media relations, raised the possibility that a journalist might get wind of it before an outbreak had been confirmed.

It was generally agreed that the worst possible action in such an event would be for the journalist to be fobbed off. A journalist, as Sue Carney said in 1980, who is confronted with stony silences, obstruction, contradiction or plain bulldust is likely to react adversely. The inevitable conclusion is that something is being kept from him or her and the journalist will dig until finding someone to confirm the suspicions. This leads to the cases where you get the "hysterical" headlines complained of, quite often this week.

So, our group decided that when an outbreak is merely suspected the media should not be informed, but if a journalist indicated some knowledge, he or she should be taken into confidence and requested not to use the information at that state for the good of the nation and other reasons. Journalists, in our view, will respond sympathetically to this approach.

Another measure which authorities should also consider to prevent publicity in the early stages, is to call a media conference to explain the situation and, to ask co-operation in keeping the information out of the news until such time as an outbreak might be confirmed. This is not a new idea and has been tried successfully in Australia.

Departmental media heads must be informed of developments at the earliest possible time. Once an outbreak has been confirmed, the authorities have a responsibility to inform the general media.

The essential messages that must be conveyed at that time are the confirmation of an outbreak, its location, the number of properties involved and beasts infected and/or destroyed. Media conferences to announced the outbreak should be held simultaneously at State and Federal levels by Ministers to assure people that an emergency plan is in action, that authorities are hopeful of containing the outbreak, details of quarantine and future restrictions likely to be invoked, the promise of regular media conferences (at least two a day



initially) and continual updates, and the assurance that the media will have access to the infected area as soon as possible on a "pool" basis, that is, where one TV crew and perhaps one still photographer would be allowed on a property to film whatever it wishes. The material would be available to all their media colleagues. The media are used to this type of arrangement.

In the Cohuna incident, the first media conference would have to be held as soon after 1.40 p.m. as possible. Between then and when the wider restrictions are in place - which might not be until the next day - the media, if they wished, would be able to go to the scene and film across the fences of an infected property. In our experience, the police would not take any action to prevent this and should not be expected to do so.

Once the restrictions have been imposed, another media conference should be called to give specifics. Stress should be given to the fact that the restrictions include the air space above a property.

When the eradication campaign is four weeks' old in this instance, the drama of the disease itself has dissipated as far as the media are concerned. After the first week, with no more outbreaks after the second day, media focus would have switched to the national sphere and international reaction - and Lloyd Beeby this week outlined vividly the likely steps to be taken by our major trading partners and the effects on the rural and, indeed, national economy. A public relations section, seeking to promote the fact that there had been no further outbreaks for 26 days, will be struggling to get media coverage.

The information necessary to develop a PR program for the Cohuna study - or for any emergency - is obviously dependent on the intelligence flow. The PR section must have constant liaison with the operations officer and the officer-in-charge of emergency centres to ensure the intelligence reaches the media.

For the PR campaign to have a constructive effect on the efficient running of the eradication campaign, the PR side must itself be constructive and efficient. Plans should be formalised for media centres to be included in the Regional Emergency Centre, and to be set up in the capital cities. In Canberra, the Bureau of Animal Health would be the obvious centre of such an exercise, and it should take steps to ensure this is done. At least one journalist from the Primary Industry Department in Canberra should be sent to the REC.

The media centres must be run by senior journalists. No-one would tolerate second-rate veterinarians in such a situation and, if media relations is really believed to be vital, you must have the best available journalists running it. Access to the Chief Veterinary Officer or OIC is essential and legal

advice should be available from the Attorney-General's Department. Another key person who should be involved is a representative of the affected industry. Effective communication between the PR section and the media would involve dissemination of the media kits to those who needed them and the regular press conferences mentioned above with the CVO or OIC available for comment. Between conferences, the PR section would regularly update information for the media, but any release should be approved beforehand by the OIC if merely factual matter is involved or by the CVO where policy matters were included.

The media are adept at finding telephones to transmit their reports in the most unlikely of places, however if their needs can be accommodated in setting up RECs, so much the better. However, the PR people will need dedicated facilities adjacent to the operations room. Telephones, telexes (in and out), facimile, photo-copier and stationery, typewriters, etc would be essential. To ease the burden of public demands for information, regularly up-dated pre-recorded messages could be available on certain publicised numbers.

Necessary human resources would include the senior journalist who would run the show, at least two assistant journalists, and clerical staff to operate telex, type up releases (although journalists should be able to do this), and answer media inquiries based on approved releases provided by the senior journalist. The PR section would have to be staffed from about 5 a.m. for early morning radio and afternoon newspaper needs until about 10 p.m. when most morning papers are "put to bed". Hence, two shifts would be needed. These facilities would have to be set up at the local level, but at State and Commonwealth level, this type of structure should already be in place.

Because the media will be in the picture from the word "go", there should be no necessity for it to be explained that certain areas are restricted. The media should have had this explained from the outset.

The names of affected individuals should not be divulged. The strongest reason for this is privacy. But have no illusions: any journalist would have no trouble finding the names of property owners, many names are on letter boxes, some neighbours would divulge the information, names could be gleaned from the patrons of bars, post offices and, from that mine of information, the telephone book. Limiting the activities of helicopters and light planes has been adverted to, but it would be a simple thing to explain to the media that disease could be spread by the whirling of chopper blades, that their intrusion could breach quarantine and interfere with the eradication program and, that the Department of Aviation (if applicable) had outlawed movement in the air space above infected premises. Circumstances would dictate whether



helicopters and light planes could be permitted to overfly the premises, but at no less than, say, 1,000 feet.

Advisers in the REC should not be answering questions from the public. Such questions should be directed to the PR section by the switchboard person. The media section should use the community services time guaranteed by the electronic media to broadcast or televise numbers for the public to call.

The PR information should be accurate because it is based on information from the infected area. The PR section would have to rely on extension officers, the field controller and the CVO to furnish and confirm information.

An essential part of any PR campaign is to monitor the results. Therefore, at a State level, the major radio, TV and newspaper items must be carefully followed. This is a useful way of quickly being in a position to quash false rumours being aired or, if as often happens the media finds out something before you, of becoming aware of the development, being able to check it out with authoritative contacts and then issuing a statement.

The special roles of local and Australia-wide radio stations, newspapers and television are basically the same. They want the latest and most comprehensive information available - and they want it as soon as it is ready. Radio journalists have deadlines on the hour during the day, but even more often at "peak" times such as breakfast, lunch and afternoon drive time. They demand "actuality" - radio interviews with a senior person with the emphasis on a short, sharp "grab" of colourful quotes. Television journalists want pictures. A senior person, such as a Minister or the CVO, is ideal but they also want action from the scene of the disaster. Newspaper journalists have less demanding deadlines, but they want the same access to the authorities as granted to electronic media. A big difference is that they will probably want much more detail. Newspaper photographers will also want opportunities for good photos at the scene of a disaster. It is essential for good will between the PR section and the media that the PR people treat all sections of the media equally. No favouritism. However, if a journalist has a specific query or piece of information which you can confirm, that journalist should be given the chance to use it first before his or her competitors are told. This is not always possible, though.

A useful summary of the key issues to be considered in preparing a media and public relations plan in response to the threat of exotic animal diseases, was given by M.J. Boland (Director of Media Services, Victorian Agriculture Department), to last year's Combined Emergency Service Seminar in Melbourne.



He said the issues were:

- . the tremendous impact an outbreak such as FMD would have on society,
- . the sensitive national and international perspectives to an outbreak,
- . the need for community co-operation especially in the face of personal hardship as herds and flocks are slaughtered,
- . animal welfare considerations,
- . the need to develop and maintain a high level on-farm awareness of the threat of exotic diseases,
- . the large number of agencies involved in combatting an outbreak and the need for them to control their public comments,
- . the need to restrict media access to infected areas,
- . the restrictions applying to movements in the area of the outbreak, and
- . the need to cope with frequent false alarms.

Before and during an outbreak, the PR program must aim at developing awareness among farmers, the agricultural sector, the media and the public of the threat posed by exotic animal diseases.

One of the major problems about a disease like FMD is the public hysteria whipped up at its mention. The PR campaign must aim to quell the hysterics. A suggestion made by one of the syndicate could help: at the end of every press release or information sheet issued by the PR section, should be the following statement:

"FMD is not contagious to humans."

\* \* \* \* \*

ANNEX FGLOSSARY OF TERMS

|             |                                                                                   |
|-------------|-----------------------------------------------------------------------------------|
| A & PHQS:   | Animal and Plant Health and Quarantine Service.                                   |
| ABAH:       | Australian Bureau of Animal Health                                                |
| ACDC:       | Australian Counter Disaster College                                               |
| ADEP:       | Animal Disease Emergency Plan                                                     |
| ADP:        | Automatic Data Processing                                                         |
| AFP:        | Australian Federal Police                                                         |
| AI Centres: | Artificial Insemination Centres                                                   |
| AMLC:       | Australian Meat and Livestock Corporation                                         |
| ANABL:      | Australian National Animal Health Laboratory                                      |
| ANEMIS:     | Animal Health Emergency Information System                                        |
| AQS:        | Australian Quarantine Service                                                     |
| AVA:        | Australian Veterinary Association                                                 |
| C & D       | Cleansing and Disinfection                                                        |
| CCA:        | Cattle Council of Australia                                                       |
| CDC-NH&MRC: | Communicable Diseases Committee<br>- National Health and Medical Research Council |
| CSIRO:      | Commonwealth Scientific and Industrial Research Organisation                      |
| CVO:        | Chief Veterinary Officer                                                          |
| DCP:        | Dangerous Contract Premises                                                       |
| DPI:        | Department of Primary Industry                                                    |
| DVO:        | District/Divisional Veterinary Officer                                            |
| EAD:        | Exotic Animal Disease                                                             |
| EDOC:       | Exotic Disease Operations Centre                                                  |
| EDSC:       | Exotic Diseases Sub-Committee                                                     |

## Glossary (cont)

|        |                                           |
|--------|-------------------------------------------|
| EIS:   | Export Inspection Service                 |
| EPA:   | Environment Protection Authority          |
| FMD:   | Foot and Mouth Disease                    |
| FX:    | Facsimile                                 |
| HQ:    | Headquarters                              |
| IP's   | Infected premises                         |
| JMOP:  | Joint Military Operations and Plans       |
| NDO:   | Natural Disasters Organisation            |
| NFF:   | National Farmers' Federation              |
| NRPC:  | National Rural Press Club                 |
| OIC:   | Officer-in-Charge                         |
| OIE:   | Office International Des Epizooties       |
| PR:    | Public Relations                          |
| RAHO:  | Regional Animal Health Officer (Victoria) |
| REC:   | Regional Emergency Centre                 |
| RVO:   | Regional Veterinary Officer               |
| SCA:   | Standing Committee on Agriculture         |
| SES:   | State Emergency Service                   |
| SMOS:  | Special Minister of State                 |
| TX:    | Telex                                     |
| VADEP: | Victorian Animal Disease Emergency Plan   |





